

# **Trust, Distance, and Design**

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# Trust, Distance, and Design

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## SUMMARY

American democracy is currently experiencing a “crisis in trust” as American's trust in their government has decreased significantly over the past half-century. To restore trust in government, public officials and technologists have increasingly turned to technological solutions such as smart city platforms, civic technology apps, and automated decision-making systems. These solutions are often guided by neoliberal design logic that limits designing with trust to pursuing efficiency and transactionality in civic relationships. The technologies this logic produces will not solve the crisis and can even exacerbate it; for instance, when the higher priority is assuring that a community's voice is heard, that a process is fair, or that the most vulnerable are able to safely express themselves. To address these concerns, I argue design in the crisis needs a new design logic—one that is centered around how technology can close manifestations of *distance* in civic relationships.

This dissertation explores how the social psychological concept of *distance*—the subjective experience of how far or how close something or someone feels to oneself—can be used as a framework to guide designing civic technology with trust. To develop this framework, I first conducted a series of ethnographic and design-based inquiries to understand how public officials in Atlanta City Government work to close *distance* in civic relationships. I then used the implications for design uncovered from these studies to inform the design a sociotechnical system I developed for the City of Atlanta's Office of Immigrant Affairs. By reflecting on the design of the system, I contribute a design framework *Trust Work*. By centering designing with trust around *distance*, my framework informs civic technologies that respond and counter the growth of *distance* in civic relationships perpetuated by the crisis in trust.

## Introduction

In 2016, the Atlanta's Mayors Office of Innovation and Delivery partnered with the Participatory Publics Lab of Georgia Tech, the Atlanta Housing Authority, and a local non-profit the Westside Future Fund to form one the Living Cities' City Accelerator cohorts in the city of Atlanta, Georgia (Living Cities 2015). The City Accelerator program provides financial support and supervision to assist city governments in pursuing projects to improve residents' quality of life (Living Cities 2015). (Living Cities 2015). The Atlanta project's goal was to examine and re-imagine the work of community engagement that occurs within the city (Asad et al. 2017). My role was to lead research efforts, which involved collecting interviews from public officials and assisting with a series of participatory design activities. Within these interviews, I came across following the perspectives of ATL311—a website and mobile platform for fielding service requests—from the Department of Public Works and a City Councilmen:

**Public Works:** *“we get feedback from the system [ATL311], which is the heaviest utilized tool for customers to relay their needs to us. And in terms of us turning those requests into deliverable services, we track our efficiency and our response and we do it on a daily, weekly, and monthly and annual basis, so that we can make sure our resources are aligned in the right places to meet our established minimum levels of service.”*

**City Council:** *“when people touch their government that way [using ATL311], I think that's really super cool. The one challenge for us is... it deprives us of information about what people are caring about in the district... one of the things that is true about the council offices before the arrival of the app is that we were very basic constituent service... My water bill is wrong. Help me correct my water bill. There's a pothole. I need the police.”*

I open my dissertation with these contrasting perspectives on how ATL 311 mediates civic relationships to animate the three central themes of my dissertation *Trust*, *Distance*, and *Design*. The tensions that arise from how the system seems to improve efficiency of service transactions at the expense of opportunities for personal interactions raise the following questions that motivate my research: do opportunities for contact—even through the mundane work of being able to solve a problem with a water bill or fix a pot hole—provide the building blocks for *trust* in civic relationships? Does the deprivation of an important way council interacted and built relationships with their constituents—the creation of *distance*—eventually lead to policy that is also distant? If the design of technologies like ATL 311 result in creating distance in civic relationships, what kind of *design* can we pursue to *close distance*?

My research uses the concept of *distance*—described in social psychology literature as the subjective experience of how far or how close something feels to oneself (Trope and Liberman 2010)—as a frame to understand trust in civic relationships. I link *distance* and trust through uncertainty: trust is the social process of overcoming uncertainty; whereas *distance* breeds uncertainty “as *something becomes increasingly distant there are more and more possible states in which that something will not materialize*” (Maglio, Trope, and Liberman 2013b). Thus, as different forms of *distance* grow in civic relationships—*distance* in decision-making power, in space and social closeness, in time or knowledge—the trust necessary to enable meaningful civic interactions becomes harder to reach.

Thinking about distance in design is timely given how according to the Knight Foundation (The Aspen Institute 2019), American democracy is currently experiencing a “crisis in trust” as American's trust in their government has decreased significantly over the past half-century.



While a certain level of (realistic) distrust between people and their government is essential for democracy (Hardin 1999), distrust in the crisis stems from “**alienation** that leads to the inability to expect competence or fiduciary responsibility, or negativism, or irrationality [which] is not healthy for a democracy as leaders need at least some grant of trust to govern effectively” (Barber 1983). I emphasized alienation, “a state or experience of being isolated from a group or an activity to which one should belong, or in which one should be involved” (Hobson 2004), as it points back to the underlying role of distance in the crisis. At the core of the crisis is peoples’ experience of distance from governance: the feeling of being so far in alienation they “can no longer understand nor effect it” which leads people to “limiting it and ignoring it” as a rational response (Levine 2015).

While the crisis permeates all levels of governance, in this dissertation, I focus specifically on how conditions of the crisis manifest in local government. I do so by studying the work of community engagement performed by local government officials. By community engagement, I refer to the wide spectrum of practices performed by public officials to meet and invite the public into the process of governing (Corbett and Le Dantec 2018c). Many in political science consider this work to be an important way to address the crisis: for public officials to “go out and get democracy” through doing the work of engaging the public (Levine 2015). For this reason, the work of community engagement is an opportune field site for engaging the crisis as breakdowns in this work are often the source of distrust in civic relationships (Levine 2015).

I have been able to create ethnographic entry points into the crisis through my broad research of community engagement during the Living cities project followed by my focused design research of community engagement in the City of Atlanta Office of Immigrant Affairs. In

these field sites, I worked to understand how public officials do community engagement, how they build civic relationships, and to discern the limits and opportunities for technology in their work. I focused specifically on how trust is operationalized in public officials' efforts to build civic relationships. Much like Goffman's notion of "performance of self" (Goffman 2014), I wanted to understand the performance of trust in community engagement; how it is enacted, embodied and practiced by public officials. From this focus, I have developed the notion of *trust work* to describe the performance of trust as relational work of closing distance in civic relationships (Corbett and Le Dantec 2018b).

As I describe in later chapters, existing civic design is dominated by neoliberal logic that produces technologies preoccupied with efficiency and transactionality; both are often at odds with trust work—either poorly mediating or even completely disrupting it. The perspective from the city councilperson in the opening example of ATL 311 illustrates this conflict. While the value of ATL 311 for Public Works is in how the system removes barriers to service transactions and increases efficiency, the city council person is concerned by how the system creates distance in his relationships with constituents by disrupting opportunities for trust work. This example typifies what I call the trap of 'removing barriers' and 'creating distance:' the unintended result of the pursuit of efficiency and transactionality in civic technology design. According to Gordon and Walter (Gordon and Walter 2016), the danger of this trap occurs "*when the application of technology to civic life is celebrated purely for its expediency, transactionality, and instrumentality, then **other uses** and users are potentially sidelined*" (emphasis added). In this dissertation, the 'other use' I explore is the relational work of closing distances. *What kind of design can help close distance and enable trust in civic relationships to address the growing crisis?*

The main contribution of this dissertation is Trust Work a design framework (named after the practices it mediates ‘*trust work*’), which provides an approach for designing civic technologies with trust. Trust Work is orientated around distance in civic relationships; it centers design around mediating the work public officials do to close distance. For this reason, Trust Work requires engagement from and with public officials who will use the systems the framework informs. This engagement with public officials in design is key—not only for buy-in and institutional support of the technology informed by the framework but also because it is the responsibility of these representatives to close distance in their relationships with the public.

## 1.1 Problem Statement

The problem space this research engages sits at the intersection of the following three areas: (1) efforts to address the crisis in trust (2) the turn to the relational presented by digital civics, (3) and the use of trust in HCI design scholarship. In what follows, I briefly describe each of these areas to articulate the gaps this dissertation fills.

(1) According to the Knight Foundation, “*by virtually every measure, Americans’ trust in most of their democratic institutions has declined dramatically over the past half century.*” This rapid decline in trust is detrimental to a healthy democracy as trust in government improves its overall function by fostering greater willingness to compromise on issues, increasing the ability to enact major legislation, as well as affording stronger commitments to less fortunate people (Uslaner 2002). The urgency of this deficit of trust has led the Knight foundation, pro-democracy think-tanks, political philosophers, and scientists to declare American democracy is now in a *crisis of trust*. The crisis is characterized by thick distrust in civic relationships between the public and their government (Roberts 2015). This distrust is now “*a given and perhaps even a framework*

*that conditions all possible [civic] relationships”* (Levine 2015).

To address the crisis, public officials and technologists have increasingly turned to technology (Businaro 2016; Greenberg 2015; Knight Foundation 2013). Smart city platforms that enhance efficiency and convenience in urban environments (Alizadeh 2017). Civic technology apps like ATL 311 that improve service transactions (Hartmann, Mainka, and Stock 2017). And more recently, algorithmic systems that streamline complex decision-making processes (Reisman et al. 2018). However, these solutions are often guided by a neoliberal design logic that narrowly frames civic relationships—citizen as customer and government as a service provider—which limits designing with and for trust to the pursuit efficiency and transactionality. Yet, increasing efficiency alone will not solve the crisis nor is it always desirable; for instance, in situations when the higher priority is ensuring that a community’s voice is heard (Diedrick and Dantec 2017), that a process is fair (Asad and Le Dantec 2015), or that the most vulnerable are able to safely express themselves (Dillahunty 2014). Civic relationships are more complex than efficiency and not reducible to the sum of transactions (Gordon, Baldwin-Philippi, and Balestra 2013).

(2) The growing digital civics agenda in HCI has pushed back against the neoliberal framing of civics by opening up a civic imaginary based on relational interactions (Boyte 2010b; Olivier and Wright 2015; Vlachokyriakos et al. 2016b). By attending to the relations that underpin civic lives, digital civics has created a design space to include modes of identity- and place-making (Crivellaro et al. 2016b; Fox and Le Dantec 2014), as well as sites of advocacy and activism (Asad and Le Dantec 2015; Crivellaro et al. 2014, 2015). The focus on relational interactions reframes civic encounters such that government services are created in the doing that happens

*between* officials and citizens and not simply delivered *to* citizens. By focusing on the co-created outcomes of civic life, digital civics provides a view government (local or national) as composed through myriad of relations with constituents, and these relations are precisely these relations that matter most in the crisis. Trust, as a first-order concern for design, has remained under examined even within the focus on relational interactions in digital civics.

(3) HCI has explored how trust can be used in design historically through value sensitive design (Friedman and Kahn 2002) and more recently through Harding et al work (Harding et al. 2015); however, neither of these provide the critical perspective needed to engage with the nature of challenge for trust faced in the crisis. Value sensitive design does not direct us to the forms of nor purpose such technology should achieve. Moreover, the way in which value sensitive design prefigures “values of human import” like trust as normatively optimal would be problematic in the context of civic relationships wherein trust and distrust play much more nuanced and complex role in mediating power and vulnerability (Barber 1983; Luhmann 1979). Harding’s work does engage with these nuances and complexities—albeit in a limited manner. Yet, the learnings are too tied to the particularities of the technology they developed. In fact, even Harding admits—that they focus too narrowly on “trust in the technology” and not enough on the nature of the relationships the technologies configure (and were configured by) which limited the success of their intervention.

To summarize the three areas of the problem space concisely: there is growing interest in the design of technology—informed-by-trust that can-enable-trust—to address the crisis. However, much of the current approaches are dominated by neoliberal design logic that frame trust in civic relationships narrowly through efficiency and transactionality (Gordon and Walter

2016; Green 2019). The turn to digital civics in HCI counters the neoliberal frame but currently lacks an understanding of how to design with trust. Given this problem space, the specific gap I address is developing a better understanding of how to design civic technology with trust so that the growing digital civics agenda in HCI will be better positioned to produce design interventions that are grounded in and responsive to the crisis.

The interventions I seek to inform are intended to mediate public officials' *trust work* to close distance in their relationships with the public. To this end, throughout my research I have observed and worked (exclusively) with public officials in Atlanta city government to investigate trust from their perspectives within the organizational and institutional arrangements of governing and providing public services. I do not consider technologies used by community members, activists, non-profits or any other entities or individuals outside of hired or elected public officials. Instead, I take an exclusive focus on public officials in order to provide much needed empirical balance to recent work in HCI that tends to approach digital civics exclusively as citizen-to-public official (Asad and Le Dantec 2015; Crivellaro et al. 2015; Erete and Burrell 2017); an unnecessarily narrow view given the importance of buy-in and support of public officials as a critical factor in the long term success of digital civic systems and addressing the crisis (Harding et al. 2015; Simon et al. 2017; Sotsky and Kartt 2018).

To understand how to design interventions for public officials, I first had to understand how they work and engage with the public. I was able to develop this understanding from my participation in the Living Cities City Accelerator project wherein I conducted a qualitative study of the work of community engagement (Corbett and Le Dantec 2018c) and the role of trust in that work (Corbett and Le Dantec 2018b) performed by public officials in the city of Atlanta. This

broad and wide-ranging study with 48 public officials spanning the city's major civic functions serves as the empirical foundation of this dissertation. I used this foundation to develop the notion of '*trust work*' and the centrality of distance to that work. These concepts emerged through a grounded theoretical analysis of my interview data which centered on how public officials viewed the role of trust in their work and how they operationalized trust to develop and maintain civic relationships.

I learned that *trust work*—the practices and process public officials perform to close distance in civic relationships—is often poorly mediated by the digital tools currently at their disposal. I argue the limitations of mediating *trust work* stem from the domination of neoliberal design logic. Under this logic, design is directed (and constrained) to produce technologies preoccupied with efficiency and transactionality. However, such tools cannot close distance and in fact can even open more distance in the process. This presents a key challenge: if the tools we design and deploy to the public sector are only concerned with efficiency and transactionality, then public officials' ability to engage publics that are most distant will be constrained. Indeed, public officials are also at the mercy of the systems that get deployed within their work environments (i.e. the city council person grappling with the impact of ATL 311 I opened this dissertation with).

To engage this challenge uncovered in my early research, I conducted design research to explore how civic design might escape neoliberal logic. I began by conducting a series of participatory design workshops with public officials. Specifically, I engaged 13 of the public officials from the Living Cities project through a design activity to develop strategies that could inform how civic technology might be orientated around closing distance (Corbett and Le Dantec 2018a). Again, I wanted to understand the opportunities for trust-orientated design from the

institutional perspective reiterating my commitment to engaging public officials in design processes. I developed four sensitizing concepts for orientating civic technology around trust from a thematic analysis of the workshop data. Taken together, these concepts begin to articulate a civic imaginary centered around trust.

I collected the key elements uncovered from the above research—*distance*, *sociotechnical components*, and *sensitizing concepts*—and applied them in a design-ethnography with the Atlanta City Government Office of Immigrant Affairs. I utilized the elements to design a sociotechnical system to mediate the offices' *trust work*. By reflecting on how the elements informed the design process and evaluating the design object, I developed a better understanding of how to design with trust. I ended by distilling this understating into Trust Work: a design framework that uses the concept of distance to inform designing with trust. I argue that distance as a frame provides resistance to the domination of efficiency in civic design, closes the gap in design knowledge of trust in HCI, and provides a critical approach to enabling trust in the crisis.

## 1.2 Research Questions

To explore my research interest at the intersection of the crisis in trust, digital civics, and trust in HCI design scholarship, this dissertation addresses the following four research questions:

1.2.1 *R1: How is the work community engagement currently practiced in local government?*

Because the design interventions I aim to create are intended to be used by public officials—to mediate their interactions with the public—it was vital to first take stock of their current work practices, specifically, the work of community engagement. As such, I conducted a broad qualitative study of engagement practices across Atlanta City government during the Living Cities project. My thematic analysis of the semi-structured interviews I conducted with public



officials provided a taxonomy of the diverse (and sometimes contradictory) practices of community engagement. One of the key findings in this work was how some of the practices complement each other, while others setup mismatched expectations and work at cross-purposes, thus creating friction and confusion for communities being engaged. For this reason, civic relationships (and trust) become difficult to maintain as municipal officials struggle with transitioning across different engagement practices and the concomitant shifts in expectations and accountabilities from citizens. This finding among the many others discussed in chapter three provide ethnographic entry points into how conditions of the crisis manifest in local government through breakdowns and friction in the work of community engagement.

#### 1.2.2 R2: *How is trust operationalized in the work of community engagement?*

R2 came in response to my findings in R1 that pointed to the vital role of trust in supporting (and enabling) the relationships created and sustained through community engagement. In fact, trust was its own distinct form of work within community engagement; the work of establishing trust, or more frequently, overcoming distrust between public officials and city residents. Despite the prevalence of trust revealed in my initial fieldwork, I noticed that trust was understudied from public officials' perspectives in political science and public administration literature as well as in digital civics and HCI design scholarship. This gap in understanding of trust presented a critical blind spot for understanding the ways in which trust might be marshaled in design of technology public officials can use to develop and support civic relationships. I addressed this gap in R2 through a grounded theoretical analysis of the same interview data set from R1. Through my analysis I developed the notion of '*trust work*' and the centrality of distance to that work. I identified eight practices of *trust work* which all pursued a unifying goal: to close various

manifestations of distance. The centrality of distance developed in this study was pivotal and the most significant finding of this dissertation.

### 1.2.3 R3: *How can trust orient design of civic technology around closing distance?*

R1 and R2 were ground setting questions that provided the empirical foundation of my dissertation by revealing the primacy distance and the *trust work* performed to close it. I leveraged this foundation through R3 to explore trust through design. I did so by using the key concepts I developed (distance, eight *trust work* practices, the process stages of trust) to scaffold a series of participatory design activities with a subset of public officials from the Living Cities project. My goal here was to develop a way of thinking about designing with trust that would be grounded in the institutional experience of public officials. My goal reflected traditional user-centered design logic: if public officials are the intended users of the technological interventions I seek to deploy, then these interventions should be informed by design knowledge derived from those users to ensure the technology will fit eventual use and adoption. Through this research, I developed four sensitizing concepts—history, experience, expectation, and preservation—which orientate design decisions around the process of closing distance. These sensitizing concepts begin to close the gaps in HCI design scholarship on trust as well as broaden the scope of design in digital civics to the institutional world of public officials.

### 1.2.4 R4: *How do the elements inform designing with trust?*

To address R4, the primary research question of this dissertation, I used the elements identified from the preceding three studies—*distance*, *sociotechnical components*, and *sensitizing concepts*—in a design-ethnography within the City of Atlanta’s Office of Immigrant Affairs. Immigrant affairs was an ideal field site as the current socio-political climate of immigration

throughout the US nationally makes the crisis in trust especially salient in civic relationships with immigrant communities. Locally, the immigrant communities the office interacts with are constantly dealing with code violations but are disempowered to confront them because of their precarious position within the city. To aid the offices' efforts to develop civic relationships with these communities as they work to address the housing code issues, I used the elements to design a sociotechnical system, Code Enforcer. By reflecting on how the elements informed designing the system *with trust*, I was able to answer R4 and complete the Trust Work framework.

### **1.3 Contribution: Trust Work**

This dissertation explores how *distance* can be used as a framework to guide designing civic technology with trust. To develop this framework, I first conducted a series of ethnographic and design-based inquiries to understand how public officials in Atlanta City Government work to close *distance* in civic relationships. I used the implications for design uncovered from these studies to inform the design a sociotechnical system I developed for the City of Atlanta's Office of Immigrant Affairs. By reflecting on the design of the system, I contribute a design framework Trust Work. By centering designing with trust around *distance*, my framework informs the design of civic technologies that respond and counter the growth of *distance* in civic relationships perpetuated by the crisis in trust.

Trust Work acts as an overarching framework with prescriptive elements that are used to determine individual projects. The first two elements—distance and sociotechnical components—work together to provide an initial analytic frame for understanding trust in civic work practice, then shift to a generative frame with the third element—the sensitizing concepts— that keeps trust central in ideation. The interventions the framework informs are intended to be used

by public officials to mediate the *trust work* they perform. Public officials are the “users” of the technology the framework informs, therefore focusing on them is a key commitment of this research. My findings throughout this dissertation illustrate how public officials are also at the mercy of the systems that get deployed within their work environments (i.e., the city council person grappling with the impact of ATL 311); therefore, designing with and for them is vital. My focus on public officials closes a crucial gap in the digital civics agenda by expanding the space of design to include the vital role of public institutions in civic relations.

Trust Work provides resistance to the current neoliberal design logic that dominates civic design into producing technologies preoccupied with efficiency and transactionality. In contrast, *trust work* is often highly inefficient and non-transactional; for instance, the work of closing social distance borne from long unaddressed historical grievances (as was the case in the westside regarding the stadium developments) or challenging institutionalized practices that perpetuate distances in power (as was the case in immigrant affairs). Trust Work escapes the dominance that neoliberal design logic holds over the civic imaginary by directing design towards the experience of distance in civic relations—distance in decision-making power, space and social closeness, in time or knowledge. Through centering distance in design, the framework expands the kind of problems design can and, more importantly, should be directed towards.

The ultimate goal of the framework is to provide a way of doing civic design that is grounded in and responsive to the conditions of the crisis. Trust Work responds to the crisis by orienting the decisions about the technologies we design and use in the civic space around distance; in effect, directing us to foster closeness in social and political relations. Winner (Langdon 1986) once remarked that doing so is vital: [As] *our society adopts one sociotechnical system after another*

*it answers some of the most important questions that political philosophers have ever asked about the proper order of human affairs.... What is the best form of political society?* According to Trust Work “the best form of political society” is one which works towards closing different manifestations of distance between the public and their governments: distance in power of decision-making, distance of spatial and social closeness, temporal and hypothetical distance in reaching civic goals, and distance in knowledge of civic processes. To achieve such a society, I use this design research to explore an answer to Winner’s crucial question (1986, p. 53): “*what forms of technology are compatible with [this] kind of society we want to build?*”

## **1.4 Dissertation Overview**

This dissertation is organized as follows:

### *Chapter 2: Related Work*

Chapter two contains the literature review for my research. It covers four areas: the crisis in trust, neoliberal design logic, digital civics, and distance. I begin the review by detailing the crisis in trust which motivates this research. Next, I outline how neoliberal design logic exacerbates the crisis and then I establish digital civics as the scholarly frame I use to resist and counter that logic. Finally, to inform design in digital civics, I turn to the literature on distance in social psychology to explore how it can be made into a frame that can guide how digital civics approaches designing with trust.

### *Chapter 3: Design Research Approach*

Chapter three discusses the design research approach I take throughout this dissertation to develop my framework. I define trust and the user centered approach I take to understand trust. I then distinguish between two types of design research I employ: research-for-design and

research-through-design.

#### *Chapter 4: Investigating the Work of Community Engagement*

Chapter four discusses my investigation of the work of community engagement that occurred within Atlanta's Living Cities Project. I conducted a series of semi-structured interviews with public officials spanning several civic functions of the city. This chapter provides the bulk of the response to R1 and serves as the empirical foundation of this dissertation.

#### *Chapter 5: Understanding Trust Work*

Chapter five relies on the same interview data gathered in the previous chapter but with a re-analysis that centered on the role of trust in community engagement. While chapter three focused on how public officials did community engagement, chapter 4 focuses on how trust is operationalized in that work. This chapter provides the bulk of my response to R2 and uncovered many of the key concepts of this dissertation: *trust work* practices, distance, trust process, etc.

#### *Chapter 6: Exploring Trust through Design*

Chapter six marks the turn from exploratory qualitative research to design inquiry through a series of participatory design workshops I conducted with public officials. I designed these activities to explore how trust can be used in design practice to produce civic technology interventions that mediate public officials' *trust work*. Chapter five begins to answer R3 by providing four sensitizing concepts—history, experience, expectation, and preservation—which orientate design around trust.

#### *Chapter 7: Designing with Trust in the City of Atlanta Office of Immigrant Affairs*

Chapter seven presents the final study of this dissertation within the City of Atlanta's Office of Immigrant Affairs. In this study, I answer R4 by exploring how the elements—*distance*,

*sociotechnical components, and sensitizing concepts*—inform designing with trust. Specifically, I explored these elements through the design of Code Enforcer platform: a sociotechnical system designed to mediate the *trust work* performed by Immigrant Affairs to close spatial and power distance between the city of Atlanta and immigrant communities facing housing injustices.

### *Chapter 8: Conclusions*

In chapter eight, I unify the three individual elements into the *trust work* framework. I then discuss how the use of distance in the framework provides resistance to the domination of efficiency in civic design, closes the gap in design knowledge of trust in HCI, and provides a critical approach to enabling trust in the crisis. Finally, I discuss future plans for the framework I will undertake as a Smart Cities Postdoctoral Associate at NYU's Center for Urban Science and Progress in Brooklyn.

## CHAPTER 2: Related Work

In this chapter I discuss existing research across four areas that motivate my dissertation: (2.1) the crisis in trust, (2.2) neoliberal design logic, (2.3) digital civics, (2.4) and distance. I begin by detailing the crisis in trust (2.1): identifying the causes of the crisis relevant to my research interests and how contemporary civic technology meant to address the crisis falls short due to the dominance of (2.3) neoliberal design logic. I then establish digital civics (2.3) as the scholarly frame I use to approach the crisis. I end by discussing the import of distance (2.4): the value of the conceptual relationship between trust and distance; how this conceptual relationship is an insightful way of understanding the crisis; and how distance as a frame is instructive to guide designing for and with trust to address the crisis.

### 2.1 Crisis in Trust in American Democracy

In 2017, The Aspen Institute Communications and Society Program, in partnership with the John S. and James L. Knight Foundation, established the Knight Commission on Trust, Media and American Democracy (Knight Foundation 2018). The commission was formed in response to the countless polls and surveys that show a steady decline in trust by U.S. citizens towards government (and media) over the last 50 years. This decline is said to present an existential threat to our democracy which requires the public to trust in the legitimacy of political process and in the ability of public officials to run government. The commissioners—27 individuals from various sectors of society (current and former members of media, business, nonprofits, academia, government, and the arts)—were charged with investigating this threat: “*Why has trust in democratic institutions declined over the years, and why is it worrying?*”

Two years later the commission published an extensive report titled “Crisis in Democracy:



Renewing Trust in America” (The Aspen Institute 2019). The report declares there is a ***crisis in trust*** in American democracy and extensively details the causes and consequences of this crisis as well as provides several recommendations towards addressing it. The report distinguishes between general trust “*in a political process that expects disagreements between competing factions and assumes an orderly sharing of power*” and particular trust “*in a specific administration or individual official, which may be contingent.*” The ‘crisis in trust’ regards the former; the report argues we are experiencing a crisis in [general] trust of the practices, intentions, and outcomes of our institutions.

The report identifies five conditions which taken together constitute the crisis: (1) poor institutional performance, (2) large-scale global “shocks,” (3) growing political polarization, (4) rising income inequality, and (5) declining economic mobility. While the report gives equal weight to all five, (1) and (4) are most directly relevant to my interests. Because I focus on the role of public officials in addressing the crisis, the first condition—poor institutional performance—is especially relevant as it highlights how and why the public come to form negative perceptions of those in power of our institutions. The second condition concerns international developments like globalization, the migrant crisis, and disinformation; all of which are less relevant to my focus on local government. Likewise, the third condition—the rise of political polarization—attributed to party divides, echo chambers, and filter bubbles is also less relevant as I do not engage with electoral politics. The fourth conditions of the crisis—increasing economic inequality—is especially relevant as the field sites of chapters 3, 4, and 7 all involve how public officials engage with communities facing economic inequality. Finally, the fifth condition—declining economic mobility—is the product of uneven distribution of national

economic gains from years of favorable financial policy for corporation's and higher income individuals which is beyond the scope of my interest.

There are two areas of the report that need to be expanded on for my research: the paradox of trust in democracy and the role of technology in addressing the crisis. The report does briefly engage the first area noting that: "*Trust is a critical element in the functioning of democracies, but it must be balanced: too little trust in government leads to political dysfunction, but too much trust can lead to autocracies.*" Here, the report adopts the widely accepted position of 'balancing trust' but does not unpack how achieving such balance requires navigating the paradoxical relationship between trust and democracy. This paradox arises from how on one hand liberal democracy is designed around distrust of government and upholding rights of individual power while on the other hand that same government requires trust—accepting of vulnerability from—to empower its leaders to enable those individual rights. Resolving the paradox is beyond the scope of my work but at least engaging the many debates around it in political science and philosophy is useful to set the foundation for how I will navigate the paradox in design.

The second area is the role of technology in addressing the crisis. The report notes this area needs more attention, "*the Commission suggests a number of areas where [technological] innovation will be particularly useful to rebuilding trust, and it calls for more research into ways that technology can serve rather than undermine this goal.*" The phrasing 'Serve rather than undermine' emphasizes a major theme throughout the report: the conflict between democratic values and the values of technology industry generally and social media platforms specifically. Moreover, this value conflict extends even beyond the reports' narrow focus on social media and online news; it applies to the broader milieu of technologies that mediate civic relationships (civic

tech apps, smart cities, and automated decision-making systems). While the report does point out this value conflict, it stops short of identifying the source. I will argue the source is neoliberal design logic that currently dominates civic design. Under this logic, design produces technologies preoccupied with efficiency and transactionality which alone will not resolve the crisis and often can exacerbate it.

### **2.1.1 The Paradox of Trust in Democracy**

To accept the primary claim of the report—that the general trust that is needed to sustain democracy is in crisis—we must first understand the role of trust in democracy: Why is the broad decline of trust in government the report identifies a *crisis*? The word ‘crisis’ originates from the Greek word *krisis* which assumed a variety of closely related meanings (*act of separating, decision, judgment, event, outcome, turning point, sudden change*) (Crisis | Definition of Crisis by Merriam-Webster n.d.) that were commonly associated with the practice of law. *Krisis* indicated a ‘*decisive moment*’ requiring judgement in human civic affairs. ‘Trust’ is derived from the old Norse word *traust* which meant “*help, protection, support*” (A Concise Dictionary of Old Icelandic - Geir T. Zoega - Google Books n.d.). Its verb form *treysta* meant “*to rely on, make strong and safe*” (Modern Philology - Google Books n.d.). *Traust* was a sense of firmness in something or someone, not dissimilar to confidence which is derived from Latin components ‘con’ which relates to bringing together and ‘fidence’ from the word *fides* which means *belief* (Faith | Definition of Faith by Merriam-Webster n.d.).

Etymologically, to claim there is a “crisis in trust” is to say: the general trust (assured reliance on the character, ability, strength, or truth) in democracy is in a time of intense difficulty or danger (crisis) that requires decisive judgment in our civic affairs (*krisis*). Yet the report is surprisingly

thin in the warrants needed to link its extensive evidence to its powerful claim of a ‘crisis.’ To scrutinize this claim we must understand the role of trust in democracy. Much of the report’s understanding of trust in democracy is drawn from a paper provided to foreground the commission’s workshops by eminent political scientist Jeffrey Abramson titled “Trust and Democracy” (Abramson n.d.). In what follows, I review Abramson’s work—supplementing it with additional literature when necessary—to understand what makes the crisis a “crisis.”

Abramson begins his essay enumerating the value of trust in democracy:

- a. *law-abidingness and voluntary compliance with programs calling for public cooperation*
- b. *willingness to vote and to participate in politics*
- c. *promotion of public legitimacy*
- d. *support for bipartisan compromises and coalitions*
- e. *check on extremes of polarization attributable to general mistrust of any candidate from the opposing party*
- f. *support for decisive government action in times of crisis and emergency*
- g. *support for programs, for instance social welfare programs, when the public trusts that such programs serve long range common interests even though they do not immediately benefit everyone*

In each of the reasons Abramson lists, we can see elements from the common understanding of trust come through: enabling cooperative actions in situations that are uncertain, accepting possible harm by fostering positive expectations of the good, deferring and accepting and thus empowering leaders to take chances in good faith on our behalf. Normatively, the value of trust in democracy is clear; however, achieving it involves

navigating the **paradox** of trust in democratic theory.

The political philosopher of trust Mark Warren details the paradox of trust in democracy extensively in his influential book 'Democracy and Trust' (Warren 1999). Warren argues the paradox arises in the connection between vulnerability and power that underlie trust in relationships: *"trust involves judgement, however implicit, to accept vulnerability to the potential ill will of others by granting them discretionary powers over some good. When one trusts, one accepts some amount of risk for potential harm in exchange for the benefits of cooperation."* This granting of power, to trust others, is what enables people to successfully conduct the cooperative social exchanges that underlie modern society: finance, agriculture, transportation, education, law, etc. According to the sociologist Luhmann *"trust, by reducing complexity"* in these social systems *"discloses possibilities for action which would have remained improbable and unattractive without trust"* (Luhmann 1979). Yet democracy is distinct as a social system due to the nature of political relationships.

Political relationships differ from other social relations as the question of trust vs distrust becomes explicit. According to Warren, *"what makes a situation political is that some issue or problem or pressing matter for collective action meets with the conflicts of interests or identities, and that parties bring their resources to bear upon these conflicts."* This is why he famously remarked, *"the mere fact that a social relationship has become political throws into question the very conditions for trust."* The 'very conditions for trust': the belief in a common good, benevolence, and positive expectations, the 'con- 'bringing together' and '-fidence' the *belief* in each other clash among the plurality of interests, identities and powers that revolve in political relationships. In this regard, the question "how can I trust?" is the very essence of a

political relationship.

### 2.1.2 Navigating the Paradox

This question of trust in political relationships, the impossibility of it, can be resolved by drawing from the work of influential political theorist Chantal Mouffe. According to Mouffe, the conflicts of interests and identities that Warren assumes “*throws into question the very conditions for trust*” are in fact essential for trust and act as the linchpin of her notion of Agonistic Pluralism (Mouffe 2000). According to Mouffe, Agonistic Pluralism is an approach to democracy that does not attempt to insulate politics from the true value of pluralism through the covert fixing “*once and for all the meaning and hierarchy of the central liberal-democratic values*.” Rather, Agonistic Pluralism welcomes the irreducible contentious nature of the “the political” in “politics.” Her model stands in direct contrast with deliberative democratic theory which operates under homogenous pretense of social objectivity that makes artificial delineations between what can and cannot be up for debate. Furthermore, she argues the deliberative model is misguided by attempting to remove the “political” from “politics” because in a pluralist society there will never be a complete end or consensus; only compromise and negotiation in an ongoing manner.

Abramson draws from (but does not directly cite) Mouffe’s notion of adversarial politics when he remarks,

*“the trick in a democracy is to fight, often vehemently against the views of others, while accepting that partisans of the other side are to be trusted as equally component to weigh in on what policies that they are for the good of the country. Precisely because we do not agree on the substance of the common good [the very conditions of trust Warren*

raised], we put our trust in shared procedure for resolving our difference democratically.”

Here, Abramson seems to agree with Mouffe’s central thesis, that “*the aim of democratic politics is transform antagonism into agonism.*” Such a system resolves the impossibility of trust in political relationships by reconfiguring these into adversarial relationships—which by nature include disagreement and strife but lacks a violent desire to abolish the other. Thus, from Mouffe’s perspective a democratic system worthy of trust is one that does not establish what is and what is not legitimately political but rather one that accepts and facilitates antagonistic dimensions among adversaries. Mouffe argues the major reason (some argue even the primary reason) our current system fails in this regard is due to dominance of neoliberal ideology that has come to fix the fundamental debate between equality and liberty. This debate is what Mouffe calls the “Democratic Paradox” or the ongoing struggle between two ideas of democracy — liberal freedom (individual rights and freedom) and democratic rule (equality and popular rule).

Under the current doctrine of neoliberalism our politics are incapable of facilitating this debate; rather, it passes this duty off to the logic of markets. According to the political theorist Wendy Brown, this shirking of duty and devolution of authority is a central tenet of neoliberalism which manifests itself by “*passing of large-scale problems, such as recessions, finance-capital crises, unemployment, or environmental problems, as well as fiscal crises of the state, down the pipeline to small and weak units unable to cope with them technically, politically, or financially*” (Brown 2015).

What is interesting is how the impacts of devolution Brown identifies correlate with the crisis: “*state funding cuts in education or mental health devolve responsibility for these undertakings to*

*municipalities, which in turn devolve them to individual schools or agencies, which devolve them to individual departments, which then have something called “decision-making authority,” absent, of course, the resources to exercise this ghostly autonomy and sovereignty.* Condition one of the crisis comes to mind here; by forfeiting their responsible to deal with issues to the market, public officials don’t have the power to deal with issues—which would lead to perceptions of “poor performance.” Likewise, when Brown links the extremes of economic inequality that have been generated in the United States over the past thirty years (condition 4 of the crisis) to “*neoliberal deregulation and the dismantling of public institutions that served modest redistributive functions and advanced equal opportunity over inherited privilege.*”

In short, Brown warns:

*“Democracy does not require absolute social and economic equality, but it cannot withstand large and fixed extremes of wealth and poverty, because these undermine the work of legislating in common.... when such extremes prevail, shared values vanish, and class powers and resentments become decisive, making the act of combining to rule together impossible.”*

From Brown’s perspective, the crisis cannot be resolved within the current regime of neoliberal governance. While this is true, this debate—the incompatibility with neoliberalism and democracy and how it perpetuates the crisis—is beyond the scope of my dissertation situated in design, HCI, and digital media. My interest is foremost technological rather than political. That being said, I do not shirk the political implications of my work. After all, philosophers of science and technology argue the political and technological are extrinsically intertwined. Most notably Winner argued the decisions about the technologies we design and use in the civic space enact our politics:



[as] *our society adopts one sociotechnical system after another it answers some of the most important questions that political philosophers have ever asked about the proper order of human affairs... What is the best form of political society?*

Winner's question is especially important in our present moment to understand the decisions public institutions are currently making as they increasingly partner with and draw from private industry to improve trust by designing technologies—civic technology platforms, smart city infrastructures, and automated decision-making systems—to mediate interactions between the public and their governments. Part of this drive is no doubt typical technological solutionism, but it can equally be interpreted as technological optimism in the face of the failures of non-digital politics to resolve the crisis. Despite this optimism, technological approaches are often (mis)guided by the same neoliberal logic that exacerbates conditions of the crisis.

## **2.2 Neoliberal Design Logic**

In the book “Economies of Design” noted design researcher Guy Julier unravels the long relationship between neoliberalism and design (Julier 2017). Julier's thesis is that we cannot understand contemporary design apart from neoliberalism; rather, we must see how design plays an active role in “*forming socially shared adherences to certain ways of working and thinking in economic worlds.*” Julier's work suggests that we might begin to view neoliberalism as a *design logic*. By “logic” I mean what media and communication scholars generally refer to as a “*perspective through which various institutional problems are interpreted and solved*” (Klinger and Svensson 2015). Logics operate as “rules of the game” with “specific norms and processes” that drive how “events and ideas are acted upon” (Klinger and Svensson 2018). With this in mind, I ask how would neoliberalism as a design logic manifest and operate within the public sector?

How would neoliberal design logic interpret, frame, and then act upon various institutional problems? Specifically, the institutional problem of the crisis in trust? What kind of design practices and cultures does this logic bring to bear on the crisis? What kind of objects would this logic produce to improve trust?

Neoliberal logic is foremost manifested as the perspective that government must (above all else) generate the highest value (like a business) in how it operates and delivers public services. This perspective is operationalized through the application of market principles to public sector functions (regulations like zoning, property taxes, and building codes; redistributive policy like public housing, unemployment insurance, and food stamps; etc. (Hackworth 2007)). The institutional problems that arise in these functions (even those inappropriate for market principles) are then interpreted in terms of creating value and are solved through pursuing efficiency.

Julier links the growth of design thinking culture within the public sector to this new interpretation. Co-opting designs' success in the private sector, the public sector engages in design thinking to "streamline" and create "new value" for the "business of government." Likewise, he ties the main thrust of design of public sector information technologies to affording efficiency through the quantification and automation of governance. Seeing itself more as a "business" and operating as a platform, government increasingly collaborates with private industry and outsources its functions. Design helps to facilitate this collaboration by providing communication technologies and opening of data. Finally, design responds to the gaps in social services and public responsibility left in the wake of efficiency, austerity, and devolution with service and social innovation design practices. Now you can (have to) "design for yourself!"

In short, Julier argues neoliberalism and its various articulations through design have not only radically changed the management of government and delivery of public services but has also reconstituted Publics: the ‘provider’ (formally a servant) is recast as a ‘business’ that *delivers* services; the ‘user’ (formally a citizen) is recast as a ‘customer’ who *consumes* services. The critiques of this reconfiguration are numerous (Brown 2015; Hackworth 2007; Pinson and Morel Journal 2016). Despite these critiques, now “*good governance at the municipal level is now largely defined by the ability of formal government to assist, collaborate with, or function like the corporate community*” (Hackworth 2007).

The neoliberal reconfiguration of civic relationships shifts how the crisis in trust is framed and subsequently acted upon with technology. For instance, condition one of the crisis—poor performance of public officials—is warped to only address a limited perspective of public officials “performance:” performance as the delivery of services (and freeing up markets to enhance those services) rather than performance as the pursuit of equity (and protection from freed up market abuse). As a result, performance is narrowly construed as transactionality. Likewise, how we should approach condition four—economic inequality—is warped into pursuing trickle-down economic policy and austerity measures as means to addressing the plight of the poor. What these policies and measures amount to is a dogmatic pursuit of efficiency—through markets and in governance—which at best ignores economic inequality and at worst exaggerates it.

In what follows, I review three prominent forms of technology in the civic space that embody this neoliberal design logic: 311 apps, smart city platforms, and automated decision-making systems. Subsequently, I will argue these technologies mistake trust for reliance—which are similar—but distinct concepts.

### 2.2.1.1 *Neoliberal Design Logic in 311 Platforms*

The popularity of 311 has grown rapidly since the first system was introduced in Baltimore in the early 2000s. The civic media scholar Eric Gordan began his influential essay, *Meaningful Inefficiencies*, by contrasting how on one hand Baltimore won awards for how its system enabled the city to become “increasingly customer friendly” while on the other hand that “friendly” city was later shut down as a result of years of anger and exclusion that culminated with the Freddie Grey murder and the ensuing riots. Gordan’s contrast was not meant to criticize 311 for what it does nor to claim that it somehow caused the Freddie Grey incident; rather, his point was to highlight how 311—as a class of technologies orientated around transactionality—impact the broader array of civic interactions technology could be brought to bear upon.

Gordan argues systems like 311 imagine a very specific kind of user the “good citizen” one who is willing, able, and ready to transact through data to inform municipal operations as a form civic participation. For some functions of government, such a formation is fine, but Gordon warns this style of configuration is “*dangerously overtaking the narrative of civic technology design*” amounting to the “311-ification of civic life” which in turn sidelines users and use cases that do not fit into this logic. In particular, the logic sidelines use cases that involve the complex, normative, and eternally agonistic dimensions of civic life in urban environments (gentrification, racism, economic inequality) that are not reducible to clicks or swipes. The result for users who are more concerned with greater agency over public priorities, decision-making, or institutional oppression is that 311 is merely an interface to the status quo and as it proliferates it reifies existing power structures even while those structures might perpetuate oppression or inequity. Thus, Gordan concludes by warning that as these systems seek to make cities more user-friendly,

they do so by narrowly configuring both what it means to be a citizen (self-interested customer) as well as what is legitimate civic action (demanding efficient services towards prescribed ends).

#### 2.2.2.2 *Neoliberal Design Logic in Smart Cities*

The civic technologist Ben Green's recent book, "Smart Enough Cities" levels a broad critique of the smart city movement (Green 2019). One smart city effort Green reviews is New York City's LinkNYC: a partnership between Google and NYC government to provide free public internet via 7,500 internet connected kiosks placed throughout the city. The costs to develop and operate the kiosks was bore by Google thus presenting an excellent opportunity for the city to provide internet access to low-income residents while saving tax dollars. Yet Green points out that Google collects and plans to monetize the data about everyone who uses the services. Thus, a "public service" which is free has the hidden cost for low-income residents whose internet connected devices would allow their movement throughout the city to be tracked, their data sold, and privacy as citizens turned over to a private company that in unaccountable to the public (even while providing public services).

The case of LinkNYC animates Green's larger thesis that we need to critically investigate (and at times resist) "smart" as a discursive frame for thinking about cities. In the rush for cities to become smart various moral and political trade-offs involved in such efforts (like LinkNYC) are often overlooked. Indeed, the optimization problems smart city technology are valorized for elide the reality that efficiency is itself a normative goal: "[efficiency] *favors particular principles and outcomes at the expense of others, typically altering how status and resources are distributed across society.*" Thus, the political questions of: "what should be made efficient?" "For who?" and "By what (and whose) criteria?" are not engaged. Rather, the logic succeeds in framing these

technologies apolitically: as neutral, optimal, and primary mechanisms for social change in the single-minded pursuit of making our cities “smarter.”

### 2.2.3.3 *Neoliberal Design Logic in Automated Decision-Making*

The AI accountability group, AI Now, has extensively documented the growing use of automated decision-making systems in the public sector. AI Now challenges trust in automated decision-making systems by pointing out the frequent moral and technical shortcomings that arise in how these systems are designed and deployed. Two recent examples from the state of Michigan exemplify these concerns: Michigan’s Department of Health and Human Services attempt to automate the state’s “fugitive felon” policy which disqualifies people from food assistance based on outstanding warrants; and the Michigan Integrated Data Automated System (MiDAS) used by the state’s unemployment insurance agency to make fraud detection more efficient. Both systems were implemented under austerity policies: the first would save the state money by using big-data to find and purge felons from public assistance and the second allowed to state to lay-off 400 employees by automating their decision-making functions. Both attempts failed: the fugitive felon system improperly kicked 19,000 residents off public assistance while the fraud detection system improperly accused 40,000 of tax violations. Michigan was successfully sued for both failures and paid settlements to amends the damage done to the lives of the people targeted by these systems.

These two instances of automated decision-making systems in Michigan exemplify neoliberal logic’s warping of how trust is pursued through technology. These systems are increasingly being used at a time when income inequality in the US is at the highest levels (condition four of the crisis in trust) while the US government under the Trump administration is issuing executive

orders cutting funding for social programs to serve the poor. AI Now notes automated decisions making systems are designed and configured primarily to mediate these goals of austerity “*with their ultimate effectiveness being evaluated based on their ability to trim cost, often at the expense of the populations such tools are ostensibly intended to serve.*” While such negligence against the poor is far from new in the US, automated decision-making systems adds new affordances: now these decisions are bias free, faster, and less contestable. Thus, trust is somehow enacted through a technology that exacerbates economic inequality (condition four) while obviating performance of public officials (condition one) who are made irrelevant or subservient in the face of decision-making that “transcends human limitations” of discretion, good-will, and ultimately trust.

#### **2.3.4 Trust vs Reliance**

It is important to remember that the 311-systems Gordon reviewed, the smart city infrastructures Green critiqued, and the automated decisions makings systems AI Now cautioned against are all framed as technological approaches to improving trust. The promises of “user friendliness,” “smarter cities,” “bias free decision-making” afforded by these technologies are all intended to improve trust. Yet, even if these promises were realized (and I showed many times they are not and even end up exacerbating conditions of the crisis) these technologies would still not actually enact *trust* but rather *reliance*. These two concepts are related but distinct in what they draw from and mean in a relationship.

According to the moral philosopher of trust Antionette Baier (Baier 1986), the difference between trust and reliance is subtle: trust (in its purest moral form) depends on goodwill of the trustor whereas reliance is dependability on habit or other factors that can force fiduciary responsibility (deterrents, threats, or other corrosive mechanisms such revenge or sanction).

Baier argues “*we can still rely where we no longer trust*” or in situations where one cannot (and should not) have the basis for morally warranted trust based on the relationship with the trustor. Thus, reliance is different from trust but can enable cooperation and action albeit in a more limited fashion.

Reliance might be the most we can ask for in our present crisis where trust cannot be based on goodwill of our officials nor of our institutions. Indeed, given the crisis in trust we might have to settle for reliance which can still enable interaction as Baier remarked: “***we may rely on our fellow’s fear of the newly appointed security guards in shops to deter them from injecting poison into the food on the shelves, once we have ceased to trust them.***” From this perspective, we might rely on technology to act as “*the newly appointed security guards in our governments*” performing the role of a deterrent and assuring efficient exchanges and transactions. We may rely on our officials’ fear of these newly designed security guards to monitor them (smart cities), to make them more efficient (311), or even replace them outright (automated decision-making).

Be that as it may, we must also ask: what is the eventual end point for civic relationships under the current approach to technologically mediated trust? How does this approach alter the nature of civic relationships (in a representative democracy at least) wherein our representatives represent us, that our servants serve us, that our institutions protect us? I ask (perhaps naïvely) if there is another way we might approach designing with trust? Even though the promises of technologically mediated reliance currently ring truer than other measures we might take to repair our body politic—especially given the failures of non-digital politics to resolve the crisis—is there another way forward that goes beyond neoliberal design logic to enable trust in the purest sense of the word rather than acquiesce to technological reliance?



To summarize, I argue the current dominance of neoliberal design logic produces technologies that—in pursuit of efficiency and transactionality—enact reliance more than trust. These technologies will not solve the crisis and—I as showed in my brief review of 311, smart cities, and automated decisions-making—can even exaggerate its underlying conditions. Specifically, condition one—performance of public officials—is narrowly construed through pursuing transactionality; whereas condition four—economic inequality—is ignored or exaggerated by the pursuits of efficiency. Thus, I propose we need a new logic of artifacts that are intended to mediate trust. To work towards this new logic, we must first escape the current domination of neoliberalism that has overtime become a Kuhnian paradigm—*dangerously overtaking the narrative of civic technology design*—as Gordon warned. How might design escape the hold neoliberal logic has on the civic design imaginary? In what follows, I discuss the turn to digital civics as one possible escape route.

## 2.3 Digital Civics

Digital Civics is an emerging field of HCI research that was first defined by Olivier and Wright in 2015 as a “local turn”, particularly for the North East of England under austerity (Olivier and Wright 2015). For them, “*digital civics is about a new configuration of government and citizenry, one that is relational rather than transactional, and in which political thinking and action can be co-produced and co-owned through dialogue across differences in experience, values, and knowledge.*” This is based on the notion of everyday politics - a democratic ideal that reclaims the commons as collectively constituted value, particularly relevant for the network society, where information flows are more suited to sharing, not selling (Boyte 2010a). Everyday politics are about renewing democracy through renegotiating the commons.

The idea of co-producing democracy is based on critique of both instrumental and deliberative democracy that both differentiate between social and political worlds. Boyte (Boyte 2010a) argues for a form of citizenship that focuses on minimizing these splits by integrating *”community, the theme of communitarians, with politics, the centerpiece of liberalism.”* Inspired by the New Deal and the civil rights movements, this is done through public work. Citizens participate in the in co-creation of democratic institutions and in the creation of public goods, in maintaining and steering commons. The internet, understood as commons, for example, is the result of a complex distribution of labor between government, higher education, entrepreneurs and so on, across changing identities and interests. There is, however, nothing intrinsically digital about public work and the related understanding of civics.

Boyte’s work draws heavily from American traditions in both theory and practice. Digital civics, however, is situated in the context of UK austerity, which have negatively impacted public services. Vlachokyriakos et al. expands on Olivier and Wright’s definition by pointing out that relational services not only grant citizens more agency through dialogue, but also make public service provision more resilient (Vlachokyriakos et al. 2016a). They envision data and place to be at the center of platforms that provide citizens with new avenues for agenda-setting and decision-making. Crivellaro et al. also link the digital civics agenda to design for services and design for social innovation, while remaining committed to the relationality agenda (Crivellaro et al. 2016a).

While the origins of digital civics in HCI does not explicitly claim to address the crisis in trust, the founding thoughts and early work of the agenda set the intellectual foundation for the work to do so. In my work in this space, I have pushed the agenda towards more explicitly to

engage the crisis. To do so, there were two interconnected areas within digital civics I expanded on and contributed to: the role of trust in the design work of digital civics and how the perspectives of public officials could (and should) inform that understanding.

The first area—the role of trust in the design work of digital civics—arises as a matter of concern within the agenda’s commitment to using design to enable participatory and relational interactions between publics and governments. Clearly, the role trust could or should play in these interactions is vital—especially given that crisis makes distrust between publics and governments so pervasive that “*it is a given and perhaps even a framework that conditions all possible [civic] relationships*” (Levine 2015). Therefore, the relational encounters the agenda seeks to bring about must begin from this framework.

The second area—the perspectives of public officials in digital civics—arises as a matter of concern for the agendas’ goal to reconfigure civic relationships. To achieve this reconfiguration requires understanding both sides of civic relationships: that of citizens as well as public officials. Despite this fact, recent work in digital civics has tended to work exclusively from the citizen perspectives, leaving the institutional side comparatively understudied. This gap creates a blind-spot for the long-term success and impact of digital civics interventions.

In what follows, I briefly discuss existing literature within these two areas. In the first area, I begin by reviewing the history of trust in HCI design scholarship followed by developing a formulation of trust appropriate for digital civics. In the second area, I focus on the work of community engagement performed by public officials—formulating this work as an entry point for digital civic interventions within the organizational and institutional arrangements of governing and providing public services.

### **2.3.1 Trust in Digital Civics Design**

Developing an understanding of how trust works and how it might be marshalled in designed systems is imperative for digital civics. Digital civics focus on participatory and relational interactions between public officials and citizens is preconditioned by the current environment of distrust (Pew Research Center 2015; Vigoda-Gadot and Mizrahi 2016). Addressing this challenge means taking on trust, an under-studied attribute of civic systems, in order to support action—and relations—in the face of imperfect knowledge, power relations, and political conflict. As first step towards developing this understanding, I revisit the history of how HCI has approached design and trust in order to frame what designing with and for trust in digital civics will require.

Historically, the interest in trust for the wider human computer interaction community came about as a necessary area of concern for e-commerce and online communities in the early 90s and 2000s (Matthew and Lee 2001; Riegelsberger, Sasse, and McCarthy 2003b; Salam et al. 2005). In e-commerce systems, the challenge was getting people to trust in the security of transactions. This was partially addressed by understanding how the design of interfaces could visibly communicate the trustworthiness of vendors at time when potential shoppers were suspicious and highly reluctant to make purchases via the web (Shankar, Urban, and Sultan 2002). In this time period, trust and risk were seen primarily through the lens of cognitive psychology where trust is based on the individual processing credible information regarding the intentions or competence of a trustee. Adapting this frame to human-computer interaction meant communicating trust became a matter of supporting rational choice based on the reliability of transactions as well as the aesthetic quality of the interface in order to infer

trustworthiness (Riegelsberger, Sasse, and McCarthy 2003a; Shneiderman 2000; Wang and Emurian 2005).

The influential trust HCI scholar Jens Riegelsberger provided an influential critique of the cognitive framing of trust in computing when he pointed out the shortcomings of the popular experimental psychology approach to understanding trust through ‘trust games’ like the “Prisoner’s Dilemma” (Riegelsberger, Sasse, and McCarthy 2003a). Drawing on game-theory, these experiments model trust (and mistrust) as the outcome of a set of calculated conditions based on a given level of information. In short, Riegelsberger argued that “trust games suffer from limited ecological validity and real-world applicability” due to how the method does not account for situational factors that are unique to the individual (Riegelsberger, Sasse, and McCarthy 2003a). He argued that external factors of time (expectation of future interactions), the role of institutions (e.g. law enforcement), and social reality (relationships, social status, etc.) are missing from these approaches, and that those missing features are crucial to fully understanding trust. Rather, Riegelsberger asserts that in real life trust comes into play when risk cannot be calculated, as opposed to the experimental Prisoner’s Dilemma games where risk is poorly simulated in artificial lab environments. Thus, trying to extrapolate design implications from these types of experiments and then “designing trust into a system” is at best a poor attempt at technological determinism (Riegelsberger, Sasse, and McCarthy 2003a). Rather, Riegelsberger argues that “trust cannot be designed into a system,” however, “designers can aim to create optimal environmental conditions for the emergence of trust, but they cannot fully determine users’ behavior.

The cognitive perspective on trust Riegelsberger critiqued differs considerably from

perspectives in social science which argue that the primary function of trust is sociological rather than psychological because “individuals would have no occasion or need to trust apart from social relationships” (Lewis and Weigert 1984). By focusing on the social relations that underlie trust, HCI began to see that trust, similar to plans and actions (Suchman 1987), cannot be removed from the experience of the individual embedded in a particular social context. This perspective on trust aligns with the field’s “turn to the social” where interactions are conceptualized as social phenomena rather than purely cognitive (Rogers 2012). Even as social phenomena are crucial to motivating and understanding trust, individual judgements do rely on logic to some degree. What a shift to a sociological perspective points out is that an exclusively cognitive frame of trust is flawed in that it does not address the equally important factors of emotion and affect.

Understanding trust as a unitary social experience is particularly important for digital civics where trust and risk take on a much more complex and dynamic nature in confronting issues with governance. Digital Civics frames technology not as a means to more perfect knowledge—via sensors, databases, and algorithms—but as interactions based in power dynamics, social and political capital, and local histories (Vlachokyriakos et al. 2016b). Likewise, trust in digital civics must invite subjectivity, conflict, and affect in civic relationships. Later, I will argue the concept of distance provides a framing of trust that aligns with digital civic’s agenda.

### **2.3.2 The Work of Community Engagement**

I argue that an understudied starting point for the relational reconfigurations of government and citizenry that digital civics seeks to bring about is *community engagement*; the wide spectrum of practices performed by public officials to meet and invite the public into the

process of governing (Corbett and Le Dantec 2018c). Different programs of engagement configure public participation in governance and serve as the basis of how civic relationships are created and sustained. For instance, the details of whether engagement is information providing, or information seeking, and the way outcomes from such engagements feed back into the daily routines of a given municipal entity shape public participation (Dutil et al. 2008). The differences between information seeking and sharing configure how communities being engaged can participate; having input into a process is vastly different than simply being told about a result. Thus, different modes of community engagement reflect a topography of power in how (or how not) citizens are afforded agency with respect to direct involvement in decision-making (Arnstein 2007).

The work of community engagement is always tied to questions of power, which in turns presents risk, uncertainty, and subsequently challenges of trust in civic relationships. This is why many in political science consider this work to be an important way to address the crisis: for public officials to “go out and get democracy” through doing the work of engaging the public. For this reason, the work of community engagement is not only an opportune field site for engaging the crisis as breakdowns in this work are often the source of distrust in civic relationships (Levine 2015) but should also be a major focus within the agenda of digital civics. Despite this fact, digital civics thus far tends to work exclusively outside-in: designing from and within the experiences of community groups and residents (Asad and Le Dantec 2015; Crivellaro et al. 2016b; Erete and Burrell 2017; Fox and Le Dantec 2014). In order to provide empirical balance, my research in this space have been inside-out: designing from and within the experiences of city departments and public officials (Corbett and Le Dantec 2018c, 2018a, 2019b).

One of the most influential inside-out studies I draw from is Michael Lipsky's "Street-Level Bureaucracy: Dilemmas of the Individual in Public Services" (Lipsky 2010). In 1983, Lipsky argued that the implementation of public policy - the work of doing policy carried out by public officials - was understudied and underappreciated in policy research. Lipsky showed how the routines, devices, practices and habits of public officials—the 'street-level bureaucrats' who interact with citizens in the course of the job and have discretion in exercising authority—become the policy itself. Thus, in order to understand public policy more fully, he argues we need to understand how the actions of public servants, the decisions they make, collectively become agency policy.

The key insight of Lipsky's work for digital civics and my research is understanding of how the individual encounters with public officials "*are places where citizens directly experience the government they have implicitly constructed....*" Since Lipsky's study in 1983 the places where citizens directly experience their government are increasingly mediated by technology—the 311 platforms, smart cities, and automated decision-making systems—I reviewed earlier. The zero-touch logics and radical disintermediation abilities of these technologies afford direct citizen contact with state systems which alters the essential gate-keeper role street-level bureaucrats once played. In turn, we now also have "Screen-level bureaucrats" the "system designers, legal policy staff and IT experts" who are becoming "*the functional equivalent of the ancient street-level bureaucracies*" (Buffat 2015).

Between the screen and street level bureaucrats lies an opportunity for digital civics relationality agenda to transform how technology is used in matters of governance. I argue that the work of community engagement provides an access point to the world of street-level



bureaucrats and the kinds of experiences and relationships they are creating as they interact with the public. Throughout this dissertation, I examine community engagement understanding it as currently practiced as the starting point for exploring how design can transform it. My approach reflects a strategy towards change that is incremental rather than immediate for sure, yet it is powerful nonetheless, as it closes a crucial gap in the digital civics agenda by expanding the space of design to include the vital role of public institutions in civic relations. Ultimately, public officials are also at the mercy of the systems that get deployed within their work environments by screen level bureaucrats (i.e., the city council person grappling with the impact of ATL 311); therefore, designing with and for them is vital.

In short, I argue it will be necessary to work both inside-out and outside-in to push civic technology away from neoliberal logics' transactionality and efficiency towards creating participatory experiences between public officials and citizens based on mutual learning, empowerment and co-creation (Asad et al. 2017; McCarthy and Wright 2015). For this reason, digital civics stands to play a significant role in addressing the crisis in trust. To take this role, digital civics must address the two gaps I introduced: explicitly engaging trust in design and directly engaging with institutional perspectives via community engagement. As I worked to close these gaps—by conducting ethnographic (chapter four and five) and design research with public officials (chapter six)—I found the concept of distance from social psychology literature to be instructive: first as way to make sense of the work public officials perform to develop relationships and then as way of thinking about trust in design. I argue using distance to work both these gaps—first as a high-level logic and then second as a specific design framework—provides digital civics a way of doing civic design that is grounded in and responsive to the crisis.

## 2.4 Distance

*Our experiences of the world are limited to the self, here and now, yet people, events, and situations that are beyond our immediate experience populate our mind. We plan for the future, remember the past, think about remote locations, take others' perspective, and consider alternatives to reality. In each case, we transcend the present to consider **psychologically distant objects***" (N Liberman 2009)

The ability to think of people, places, events, and realities beyond present experience is a fundamental function of the human cognitive system (Henry 2008). This ability allows us to plan for retirement or vacations, to empathize with other cultures and social groups, to design new products and realities. Things not here (being on vacation in Italy), now (retirement in 15 years), or yet (design of a new app) must be represented in the mind through a process called "psychological construal" (Trope and Liberman 2010). In performing these construals, our minds take present experience (this moment, this place, this body, this reality) as the reference point from which all other representations are formed and measured against. The representations we form appear concretely (e.g. the exact layout of the interface and user actions) or abstractly (e.g. high-level features and goals of the new app) depending on *distance: the subjective experience that something is far or close to oneself*" (Trope and Liberman 2010).

To illustrate, the goal of finishing a dissertation can feel close ("I'm almost done!") or far ("I'll never be done!"). What matters is not the objective distance to this goal but rather how far away it feels subjectively. The farther an object feels influences how it is represented in the mind; more proximate objects appear concretely while more distal objects appear abstractly (Maglio, Trope, and Liberman 2013a). Therefore, the more proximate feeling "I'm almost done" leads to

specific thoughts about life after graduate school (where am I working, moving to, etc.), whereas the more distal feeling “I’ll never be done” leads to abstract thoughts of finishing (being “Dr. Corbett” someday).

Through years of experimentation social psychologist identified four core dimensions of distance—spatial, temporal, social, and hypotheticality (Table 1). How close or how far finishing a dissertation feels corresponds to the dimension of *hypotheticality* where distance takes the form of probability: how close or far is finishing to present reality? To illustrate, “I’ll never be done” is far from reality, whereas “I’m almost done” is close to reality. These distances are also said to be linked such that distance in one dimension influences distance along other dimensions. For instance, the hypothetical distance expressed in “I’ll never be done” can also manifest distance from the social identify of “being an academic.”

The orange portions in table one reflects my addition of power and knowledge distance to the original four. Traditionally, power is treated as a subset of social distance (Magee and Smith 2013) but for my interests here I separate it out as power plays a significant role in civic relationships and trust. Likewise, knowledge itself is not a distinct dimension of distance but rather a factor that influences the experience of distance of each core dimensions. Nonetheless, I separate it out as information asymmetry, experience, and education play significant roles in community engagement.

Researchers have studied how perceptions of distance impacts judgement and decision making in various social situations (Van Boven et al. 2010; Jones, Hine, and Marks 2017; Spence, Poortinga, and Pidgeon 2012). For instance, the behavioral science research of Spence et al argue that reducing the hypothetical distance people feel towards climate change is vital to increasing

<b>Distance</b>	<b>Operationalization</b>
<b>Time</b>	Future (e.g., make a decision that would be implemented tomorrow versus a year from now; imagine an event in the near versus the distant future)
	Past (e.g., an object that belongs to the present or to the past)
<b>Space</b>	Nearby versus faraway place (e.g., the map represents a path from your office to the nearest cafeteria versus from an office in another city to the nearest cafeteria)
<b>Social</b>	Self versus other (e.g., you describe or decide for yourself versus for another person)
	Similar versus dissimilar other
	Familiar versus unfamiliar other
	Ingroup versus outgroup
<b>Hypothetical</b>	High versus low probability
	Real versus hypothetical (e.g., you play a demo of a game versus the real game)
<b>Power</b>	Control (e.g., the amount of control someone has over your outcomes relative to how much control you have over their outcomes)
	Decision-Making Authority
<b>Knowledge</b>	Information Asymmetry
	Experience
	Education

**Table 1: Dimensions of distance** and different ways each have been operationalized in previous research. Blue reflects the original four dimensions while orange reflects the additional two added for the purposes of this research.

public engagement with the issue. (Spence, Poortinga, and Pidgeon 2012). The organizational management research of Li and Chen argue social distance between organizations and employees negatively impacts overall organizational health (Li and Chen 2019). More closely

related to my field of HCI is the business research of Darke et al whose work illustrated how spatial distance impacts perception of trust of online retailers (Darke et al. 2016). Through these three studies we see distance has implications for design of information (spence provided recommendations for designing messages about climate), organizations (Li and Chen suggest practices and policies for management), and interfaces (Darke provides recommendations for online business' webpages).

It is also worth noting the ways in which distance is discussed outside of social psychology in my field of digital media. Indeed, distance (in the colloquial sense of the word rather than the specific psychology take on it) figures prominently in the work of media scholars like McLuhan, Castells, and Brock. For McLuhan, the most important characteristic of digital mediums is how they increase the range and reach of our sensory systems, becoming “extensions of man” that allow us to close distance in time and power (McLuhan 1964). For Castells, the “space of flows” that define modern society reorient our relationships with distance in time and space according to the network logic where information and knowledge production are centered (Castells 1996). More recently, Brock discusses how social media platforms like Twitter mediate black culture by closing social distance amid disparate publics of African American identity – what his recent book refers to as “Distributing Blackness” (Brock Jr 2020). Through these three scholars we see strong arguments for how digital technologies mediate society's relationship with distance: extending us according to McLuhan, reorienting us according to Castells, and distributing us according to Brock.

Distance has also been a fundamental topic within HCI. In this scholarship, distance is most often a design constraint that researchers work against and within. HCI scholars' perspectives

Characteristic	Description	Implications
Rapid feedback	As interactions flow, feedback is as rapid as it can be	Quick corrections possible when there are noticed misunderstandings or disagreements
Multiple channels	Information among participants flows in many channels—voice, facial expressions, gesture, body posture, and so on	There are many ways to convey a subtle or complex message; also provides redundancy
Personal information	The identity of contributors to conversation is usually known	The characteristics of the source can be taken into account
Nuanced information	The kind of information that flows is often analog or continuous, with many subtle dimensions (e.g., gestures)	Very small differences in meaning can be conveyed; information can easily be modulated
Shared local context	Participants have a similar situation (time of day, local events)	A shared frame on the activities; allows for easy socializing as well as mutual understanding about what is on each others' minds
Informal “hall” time before and after	Impromptu interactions take place among subsets of participants on arrival and departure	Opportunistic information exchanges take place, and important social bonding occurs
Coreference	Ease of establishing joint reference to objects	Gaze and gesture can easily identify the referent of deictic terms
Individual control	Each participant can freely choose what to attend to and change the focus of attention easily	Rich, flexible monitoring of how all of the participants are reacting to whatever is going on
Implicit cues	A variety of cues as to what is going on are available in the periphery	Natural operations of human attention provide access to important contextual information
Spatiality of reference	People and work objects are located in space	Both people and ideas can be referred to spatially; “air boards”

**Table 2:** Olson’s list of essential characteristics of face-to-interactions. Olsons’ seminal thesis on distance revolves around these characteristics. Each characteristic ties social distance with spatial distance in ways that are difficult if not impossible for technology to mediate.

on technology and distance tend to be more measured in contrast to the strong claims of media scholars. Most notable is the seminal work of Judith and Gary Olson whose work tempered claims that the boom in growth of communication technologies in the early 2000s had made distance irrelevant in contemporary society (Olson and Olson 2000). They famously argued that *“distance is not only alive and well, it is in several essential respects **immortal**”* as there are several innate characteristics of face-to-face human interactions (see table 2) that “emerging technologies are either pragmatically or logically incapable of replicating.” They argue it is through these characteristics that common ground and context are established which are both closure of social distance.

In sum, while distance has been a prominent theme in both HCI and digital media, I argue the social psychological understanding of distance is most useful for my interests in understanding how to design with and for trust. The basis for my argument is the relationship between trust and distance I developed in chapter five. In what follows, I briefly outline this relationship drawing from the literature on trust and distance as well as some of my findings.

#### **2.4.1 Distance, Trust, and Uncertainty**

Between the literature on trust and distance there exists an underarticulated connection through uncertainty. I first began to notice the connection between distance, trust, and uncertainty in the work described in chapter five wherein I conducted a broad, qualitative study of how public officials enact trust in their work of community engagement (Corbett and Le Dantec 2018b). In this study, I wanted to understand how public officials “did” trust, how they thought to enact trust in practice as they engage with the public. One such practice was ‘meeting people where they are’ which was described as the work of leaving city hall in order to engage

in civic interactions in familial social places of constituents. By eschewing of spaces of institutional authority, ‘going out and getting democracy’ during community events, at grocery stores or train stops, on weekends and evenings after city working hours; officials sought to signal and convey good-will towards developing trust. To make sense of public officials’ perspectives of how practices like “meeting people where they are” enact trust I turned to the literature.

While the literature on trust is fractured across disciplinary silos there is wide consensus on uncertainty. As the scholar of trust Guido Mollering once remarked “*trust begins where knowledge ends*” (Mollering 2006), allowing for actions that may not be completely rational or which operate in the face of poor or conflicting information. For this reason, trust comes into play only when the uncertainty presented by a situation cannot be eliminated. Colloquially, trust enables a “*leap of faith*” (Mollering 2006; Möllering 2001) over uncertainty. This metaphor, ‘trust as a leap over uncertainty’ is where I begin to link trust and distance.

Distal things are inherently uncertain “*as we move away from direct experience of things, we have less information about those things*” (Nira Liberman, Trope, and Stephan 2007). As a result, distance breeds uncertainty “*as something becomes increasingly distant there are more and more states in which that something will not materialize*” (Maglio, Trope, and Liberman 2013b). It is in this way that trust and distance are connected: as distance is extended and thus abstraction, so too is the trust needed to overcome greater uncertainty. Conversely, closing different kinds of distance—spatial, temporal, social and hypothetical—becomes the vehicle for developing trust.

Using this articulation of the connection between trust, distance, and uncertainty I claimed that ‘meeting people where they are’ as a practice enacts trust by closing spatial and social



distance between public officials and constituents. This aligns with how trust scholars note, the space of interaction is important for trust, as trust is easier to develop in conditions of social and spatial familiarity (Barber and Gambetta 1992) . Additionally, scholarship on distance notes there is a strong reciprocal relationship between spatial distance and social distance: spatial distance is mentally associated with social distance (i.e. sitting further away from someone). Similarly, the use of polite, formal language instead of casual, informal language conveys social distance but also produces a sense of spatial and temporal distance.

By relating the various practices described by public officials in my study back to the connection between trust, distance, and uncertainty I developed a novel conceptual relationship between trust and distance. ‘Meeting people where they are’ exemplifies this relationship and was one of eight practices that comprise the notion of “*trust work*” I developed: the relational work of closing distance in civic relationships to develop trust. Each of the practices works at closing different dimension of distance—distance in decision-making power, distance in space or social closeness, temporal and hypothetical distance in reaching civic goals, or distance in civic knowledge—which create uncertainty in the civic relationships between people and their representatives. Exploring this connection between trust and distance through design is the focal point of this research.

## CHAPTER 3: Design Research Approach

Each chapter of this dissertation is a self-contained study with specific methods therefore; I will not detail each here. Rather, in this chapter I outline the overall approach that threads the individual studies together to address my primary research interest: developing a better understanding of how to design with trust. First, I provide a working definition of trust from existing literature and the user centered philosophy I take in understanding trust from the perspectives of public officials. I then describe the two types of design research I conduct: research-for-design to generate design knowledge; research-through-design to validate that knowledge through design practice.

### 3.1 Trust

Trust is a mechanism for dealing with uncertainty. Without uncertainty, there would be no risk; no risk would obviate the need for trust (Möllering 2001). For this reason, trust comes into play only when the risk presented by a situation cannot be reduced entirely. The process of trust is best described as how one comes to form expectations that allow the “leap” over uncertainty (Möllering 2006b). The mechanisms that enable that process derive from “distinct cognitive, emotional, and behavioral dimensions which are merged into a unitary social experience” (Lewis and Weigert 1984); this then allows for the “reduction of complexity, [and] discloses possibilities for action which would have remained improbable and unattractive without trust” (Luhmann 1979).

Understanding trust as a process stands in contrast to how it is more commonly viewed as a variable with different strength levels. As Khodyakov remarked, “*most contemporary social*

*scientists do not view trust as a process. This can partly be explained by the fact that trust is traditionally measured through surveys and experiments, which are not particularly useful for depicting the dynamic nature of trust"* (Khodyakov 2007). Rather than a dynamic process, trust is more often understood as a *choice* at a particular point in time, as an *attitude*, or as a *predisposition*. Deviating from this perspective, the trust theorist Möllering argues "*people's trust should be conceptualized and operationalized as a continuous process of forming and reforming the attitudes static surveys have measured so far and, crucially, as part of larger social processes*" (Möllering 2013). Möllering argues the starting point for understanding trust as process is a conceptual shift from thinking about "trust" to "trusting" as the latter "*expresses that the object of study it is not just a measurable outcome (i.e. attitude or behavior) but the particular ways such outcomes are produced and used.*" He further adds "*'Trusting' acknowledges that the 'product' of trust is always unfinished and needs to be worked upon continuously.*"

I augment the above formulation of trust using the concept of distance. I use the dimensions of distance as analytical heuristics to understand how public officials do the work of trust—what I call *trust work*. I frame *trust work* as the vehicle for closing different kinds of distance in civic relationships which present uncertainty. Tying back into the perspective of process, trust enables the "leap" over distances, but completing that leap is a *process*. I later provide three stages to frame that process—initiating, building and retaining—in order to mark how the work of closing distance changes as civic relationships develop. My treatment of trust and distance stays true to trust as a social experience but frames this experience through the different dimensions of distance. I argue this framing of distance provides more tangible entry points for design.

Throughout this dissertation I operate under user-centered design philosophy which posits

the importance of designing with and from the perspectives of eventual end-users. My end users are public officials in local government. I undertake research to understand them, I design for them, and design with them; all in order to support and enable trust in their interactions with the public. My approach is exclusively inside-out: working from within the institutional perspective rather than outside-in. I am aware of the limitations in taking this approach as I understand trust requires active agency by the actors involved in a relationship as trust is a “*social process involving the interaction of trustor and trustee with each other and with their social context.*” Thus, to fully understand trust in any relationship one must engage the trustee (the public) and trustor (public officials).

That being said, my limited view is an intentional move to provide empirical balance to how public officials as trustees perform and pursue trust. Indeed, through the Knight report and many other sources of social and political science literature, the outside-in perspective of trust is well understood. For my interests in developing an approach to trust that is responsive to the crisis, I argue it is vital to understand the inside-out perspective in order to account for it in design as is ultimately the responsibility of our officials to close distance in their relationships with the public. Nonetheless, even if in the pursuit of empirical balance, my approach does present serious limitations. Especially, given how on one hand trust is always tied to questions of power and on the other there is often significant power imbalances in power between the public (especially the marginalized) and their officials. Thus, mediating trust through design will always be caught up in this challenge. I discuss these challenges in detail in the future work section of the final chapter.

### 3.3 Methodology

To construct my framework, I take a design research approach broadly defined by Zimmerman, Stolterman, and Forlizzi (2010) as “a research approach that employs methods and processes from design practice [sic] as a legitimate method of inquiry.” They distinguish between three different types of design research:

1. Research about Design -> understanding the human activity of design
2. Research for Design -> improving design practices
3. Research through Design -> using design practice as a mode of inquiry

In this dissertation, I use types two and three. I began with research-for-design to provide the empirical foundation for digital civics design practice in this space. The research in chapters four and five use the work of community engagement as the empirical jumping off point for generating design knowledge. This was valuable for two reasons. First, the work of community engagement is generally understudied within HCI. Second, community engagement as a field site presents an opportune entry point into the crisis in trust. These two studies provided three implications for design: chapter four argued design should approach community engagement as sociotechnical work which configures civic relations across an assemblage of practice, artifacts, and social arrangements; chapter five argued designing to enable trust in civic relationships should be understood as closing distances as a process with distinct stages.

The work in chapters six and seven are the second type of design research: research-through-design that employs participatory design methods and design-ethnography to generate and evaluate design knowledge. In chapter six, I used the concepts I developed in chapters four and five (*trust work*, distance, process, sociotechnical components) as the raw input in a

participatory design activity with public officials. Here, I sought materialize those concepts through design practice in such a way that would allow public officials to explore and re-think how they envision the role of trust and technology in their work. By analyzing how those officials worked through the materials, I developed four sensitizing concepts—historicizing engagement, focusing on experience, mediating expectations, and preserving institutional relationships—which I argued to help direct designers and researchers in solving design problems related to supporting trust in civic technology.

Chapter seven is also research-through-design but here rather than generating new concepts my goal was to evaluate existing concepts. The previous work had developed design knowledge to inform designing with trust, but this knowledge could only be verified through actually applying it through design. To do so, I conducted a design-ethnography of the City of Atlanta Office of Immigrant Affairs. By “design-ethnography” I mean I used ethnographic methods in service of producing a design object rather than writing culture. This turn was instructive—as even though my ultimate interest lie in design, trust is so heavily dependent on context designing with for trust necessitates a thick-understanding to ground design practice in the lived experience of the space. Thus, while ethnographic methods are traditionally used to write about culture, I turned these methods to understand the space richly enough to produce a design object that is responsive to trust in context.

Design research as an approach means working with “*an intention to produce knowledge and not the work to more immediately inform the development of a commercial product.*” This perspective places the focus of design on knowledge production, rather than object production. This is key: the objects produced in design research are typically more probe than product. The

design object becomes the researchers' instrument of study. The design object I eventually produced in chapter seven—the code enforcer system—reflects this approach.

Code Enforcer is a sociotechnical system designed to be used by the City of Atlanta's Office of Immigrant Affairs to aid in their ongoing efforts to assist immigrant residents' ability to get repairs and maintenance of their living spaces. I had two goals in mind for this object. First, I wanted to apply my design knowledge to an object in order to evaluate and iterate that knowledge: how does (or does not) the concepts of distance, sociotechnical components, and sensitizing concepts—inform designing with trust? Put simply, how can these concepts actually be used in design practice? Second, I wanted to evaluate how an object informed by that knowledge could (or could not) mediate *trust work*. This second goal of evaluation was unfortunately not possible due to the covid-19 pandemic which prevented the system from being deployed.

With the empirical research completed, I took on the stance of the reflective practitioner, pausing to reflect and collect the implications for design uncovered from the above research and I asked myself: *what had I learned from the above research and how could it be translated into concepts and steps design for and with trust?* From this reflection in chapter eight, I developed Trust Work, a framework that informs how to design civic technologies with trust.

## CHAPTER 4: Investigating the Work of Community

### Engagement

The empirical foundation of my research is understanding the work of community engagement in local government. Asad et al. recently pointed out, “*community engagement is to cities what user experience is to computing: it signifies a large and multi-faceted category that simultaneously speaks to general qualities of interaction and to specific ways of doing that interaction*”(Asad et al. 2017). The fact that *community engagement* labels a diverse set of goals, practices, and accountabilities points to similarities in what Law called the mess in the social sciences (Law 2004). Law’s notion of “hinterlands” is particularly apt: described as the collection of backgrounds, practices, and inscriptions that produce scientific realities, the hinterland, for Law, is the accumulation of these things that enable new scientific knowledge to be produced.

Likewise, within municipal government, there are diverse professional backgrounds, practices, and inscriptions that form the hinterland of community engagement (Ekman and Amnå 2012). Expectations become set in terms of accountabilities and obligations. The details of whether an engagement is information providing, or information seeking, and the way outcomes from such engagements feed back into the daily routines of a given municipal entity matter because of how they shape public participation in governance (Dutil et al. 2008). The differences between information seeking and sharing create mismatched expectations in communities being engaged by municipal actors; having input into a process is vastly different than simply being told about a result. These strains only become more apparent when new technologies or platforms are introduced and placed within political boundaries where the work of engagement



runs up against power dynamics within municipal organizations (C. A. Le Dantec et al. 2015; Evans-Cowley 2010a, 2010b).

Such an observation is not new to computing. In 1978, Kling pointed out in a study that compared rational, organizational, and political processes in policy making that “the political order of the social setting in which a computer-based system is utilized must be well understood, in addition to the technical features of the system, to predict its likely uses and impact” (Kling 1978, 671). His observation resonates 40 years on, where mismatches in the underlying expectations of community engagement within the municipal entities doing the work create challenges for officials and residents alike. As Volda et al. point out, it is not just “about *what* values... [but] about *how* those values are operationalized and embodied” (emphasis original) (Volda et al. 2014). Ultimately, it is not necessarily the political and social-order of community engagement that are contested; it is how engagement is implemented that becomes a site for conflict and mismatched expectation.

Drawing these together, I recognize that there is an opportunity for computing research within the context of municipal organizations who are doing community engagement in all of its many forms. Computing technology clearly plays a role in such work, but even as computing research has long been interested in matters of governance (e.g.; (Kling 1978; Martin, Rouncefield, and Sommerville 2002)), the social, technical, and political landscape continues to shift, thus inviting close empirical study of engagement practices and the opportunities for designing sound computing support. Therefore, my research question in this study was: *How is the work community engagement currently practiced in local government?*

To answer this question, I conducted a broad qualitative investigation of engagement

practices across Atlanta's municipal government (Corbett and Le Dantec 2018c). My findings provided a taxonomy of the diverse (and sometimes contradictory) practices of community engagement. One of the key findings in this work was how some of the practices complement each other, while others setup mismatched expectations and work at cross-purposes thus creating friction and confusion for communities being engaged. It is within these points of friction that conditions of the crisis and subsequent strain in civic relationships become evident.

## **4.1 Methods**

To develop a broad understanding of community engagement practices, I conducted 34 semi-structured interviews that spanned 15 different departments and agencies within Atlanta's city government. The inventory of community engagement practices included interviews with elected officials, appointed officials, department directors, and professional civil servants. Participants were recruited through the institutional connections within the Living Cities project.

I interviewed at least one person in each department. My interview selections were made to ensure appropriate coverage given the breadth of public-facing agency work. For example, in the case of public works, while engaging with residents of the city was an important part of its job, the majority of its work was in the logistics and management of city services and infrastructure; on the flip side, across the planning organizations, work covered a range of public-facing engagements around the development and implementation of infrastructure and policy projects. I also interviewed officials at two agencies that represent development-focused public-private partnerships in the city. They straddle a common boundary in US cities where public accountability in the development of infrastructure and economic investment activities

<b>Municipal Department</b>	<b>Respondent</b>
<b>1</b>	Parks & Recreation
	R1, R2, R3, R4
	Public Schools
	R5, R6, R7
	Cultural Affairs
	R8, R9
	Immigrant Affairs
	R10, R11
	Workforce Development
<b>2</b>	R12
	Public Works
	R13
<b>3</b>	Watershed Management
	R14
	Courts and Solicitor General
<b>4</b>	R15, R16, R17
	Public Housing Authority
	R18
<b>2</b>	Zoning Review Board
	R19
	Department of City Planning
<b>3</b>	R20, R21, R22, R23, R24
	Regional Planning
<b>3</b>	R25
	Invest CITY
<b>3</b>	R26, R27, R28
	Beltline Partnership
<b>4</b>	R29, R30
	City Council
<b>4</b>	R31, R32, R33, R34

**Table 2: List of departments and respondent codes for each interview. Departments are clustered, 1–4: service-focused units to elected officials**

meet private interests in the implementation of those projects.

Table 1 lists the departments and agencies interviewed and the number of individuals I spoke with in that department. I have clustered and ordered the list so that departments involved in service provision are at the top (1), followed by those involved in planning and policy making

(2), then the public-private development agencies (3), and finally city council as a body comprised of elected officials who have a particular relationship to the public (4).

Each interview lasted 45 to 90 minutes and began with a brief overview of the purpose of the research collaboration followed by a series of questions asking the respondent to describe their background and role in their organization. Next, I asked them to define community engagement, followed by how it factors into their role as well as the work of their agency or department. The interview then proceeded to questions on how community engagement work is carried out, including: how goals or assessment measures were set, techniques and locations for reaching appropriate constituencies, understanding the challenges of engaging different parts of the larger urban community, and finally how different technologies were used—or needed—to effectively do the work of engagement and measuring its outcomes.

I recorded all of the interviews and transcribed each recording. To analyze the interview data, I followed Seidman's guidelines for qualitative analysis which focuses on the "connections among events, structures, roles, and social forces" present in a given context (Seidman 2012). Seidman builds on the analytic foundation of grounded theory (Strauss and Corbin 1998), however, is less focused on the articulation of a unifying theory, instead attending to the process of describing the connective threads developed in analysis.

I initially coded the interview data attending to instances where respondents spoke to the goals of engagement work, the techniques and media employed in reaching those goals, as well as the motivations for doing engagement work with different constituencies. These areas of early focus enabled us to further articulate the structures and patterns of work across the range of agencies and actors practicing community engagement. Five common categories of community

engagement emerged through my analysis and create a framework for understanding community engagement through a lifecycle of specific initiatives and a range of different goals with respect to interacting with the larger public of city residents.

## 4.2 Findings

My findings begin to characterize city-scale community engagement practices across the following prominent themes: *raising awareness*, *building relationships*, *setting the table*, *finding opportunities*, and a cross-cutting theme focused on *technology use*. These themes are not temporally ordered in practice—agencies might deploy these practices at different times as needs and opportunities arise. However, there is a logical progression useful for ordering how I discuss the different practices: from establishing awareness of municipal functions to organizing people and agencies, to managing resources, and finally to taking action to address city-scale issues in governance and planning.

### 4.2.1 Raising Awareness

The first theme in my synthetic ordering is *raising awareness*. The practices that compose this theme are bi-directional: sometimes they are done to become aware (in the case of an agency soliciting input into local needs), and at other times they are done to make aware (in the case of working to inform residents about a topic). At the most basic level, this work is about making municipal operations legible to city residents—making sure that residents are aware that a department exists as well as its function in the overall structure of the city government. For instance, R12, in the workforce development agency reflected on the importance of this basic awareness: “*my job is to let the community know that I exist, and how I exist. Many people don't know that we're here, or the ones that do know that we're here don't know what purpose I serve.*” If

residents of the city do not know existence or function of an agency, they are unable to interact with it. As R12 points out, this is especially true for organizations that are obscured in the increasingly complex leviathan of local government.

Making points of connection legible through access points with municipal entities is a crucial outcome of practices aimed at *raising awareness*. For instance, consider the access points of public works which handles waste management and infrastructure maintenance: *“Everybody sees their garbage man come by once a week to collect their can”* R13. This department also maintains a website and call center which, *“processes almost 10,000 calls a month, for potholes, for recording solid waste, illegal dumping, and so communication is two-way. And I gain a lot of valuable feedback from that communication as well”* R13. In this case, the day-to-day service work is highly visible and maintained through a robust multi-modal system of access points that improves service delivery as well as affording a high level of institutional awareness.

By contrast, consider another large and visible institution, public schools, which are typically accessed through contact with parents and children of the system. Outside of the contact that occurs through normal classroom and school interaction, R5 wondered how to engage with parts of the larger community who are not directly connected to their local schools but could and should engage in improving it: *“I think I get—for people who have kids in the system, there's one level of engagement. But with people who have no inroads to the system, I think they feel like, ‘Okay, I want to make a difference somehow with our school system, I don't know a way in.’”* The challenge here is building an awareness of how to access parts of the larger municipal system for individuals not normally within the purview of how that system operates.

Whether delivering services or working to make it easy for concerned residents to

contribute to governance operations, *raising awareness* relies on a number of different techniques. These range from simple surveys all the way onto forms of deep-hanging out. Communication can occur in the form of asynchronous communication (website, flyers, email), or be synchronous communication (town-hall, forum, community meeting). The choice of mode and medium depends on the content, time and resource constraints, as well as the preference of the department or agency.

Ultimately, no matter the choice of how communication happens, municipal officials “*have to measure what's tolerable for the community, because you don't want to harass them, but you do need them to know. So, it's a sweet science trying to figure that out*” R31. This means filtering information and determining frequency: “*you don't send something on a routine basis. You don't do a weekly update. You don't do any of that. I only send emails when I know when you see it, you're thinking, 'I am glad that they sent that to me. It may or may not pertain to me, but it was important enough that I was glad to get it'*” R32. The concern here was that routine messages would be more easily ignored, whereas infrequent messages would stand out and grab the attention of their constituents. While making these kinds of choices are part of the work, especially for elected representatives who need to build and sustain political will for initiatives they care about, they are also one-way power is exercised by municipal authorities.

Exercising this power also comes through the way language is used when *raising awareness*. The language of governance and city operations often presents a barrier; because of its technical origins it is often not easily accessible by residents. This is especially important in communities of lower socio-economic status as R26 observed: “*In more of our poorer communities, it is very difficult because there is a translation problem. I speak in our language, they speak in their language.*”

*Oftentimes, we're saying the same thing, but it's how I say it and how they say it that I could be missing each other."*

For many of the individuals I interviewed, *raising awareness* is the definition and sole practice of community engagement. In fact, "communication" was often used interchangeably with "engagement"—where *"communication and buy-in matters, making sure people understand what they're doing, why they're doing, why it matters, and able to articulate that back in a way"* R16. But how this goal of communication unfolds differs across inscriptions, to use Law's phrasing, that change over time and across municipal agencies. These differences begin to shape out the hinterlands of *community engagement* where different, and at times conflicting logics governing the ends and means of engagement become the grounds for misaligned expectations. For instance, a city councilperson can switch between quick pulse-checking of her constituents on twitter to more intimate, time-consuming face-to-face interactions to develop relationships; meanwhile, public works officials view their call centers and internet service portals as a similar category of work. The first is much more closely tied to building forms of participation, while the other is very much about service transactions and responding to the public as one might to customers.

The consequence is that calls by residents for greater efforts in community engagement, calls which are often motivated by a desire to exert more local control and community agency over governance (e.g., (Arnstein 2007; Asad et al. 2017; Crivellaro et al. 2015)), require translation across different municipal functions and professional practices. There is a vast gulf between the transactional engagements of customer service and the relational engagements of deep hanging out and what amounts to forms of capacity building as officials work with communities to raise



their awareness of legislative, policy, and development activities that will affect their neighborhoods.

#### 4.2.2 Building Relationships

Responding to these differences, it became clear across my respondents that *building relationships* was an important practice within the wider landscape of community engagement. Similar to the notion of articulation work (Schmidt 2008), *building relationships* describes the necessary supra-work of negotiating and connecting between actors, goals and tasks. According to R25, a regional planner: “*I as people who engage communities, I can't afford to just do this one-off type thing. It's about building relationships, it's about building trust. People talk to and divulge meaningful information to people they have a relationship with.*” Here, R25 observes that *raising awareness* (as described above) is not sufficient for “meaningful engagement.” Entangled in this desire for meaningful engagement are a nest of questions around meaningful for whom: is the quality of information sharing most critical for the planner who needs local knowledge? Or for the community member who needs to understand personal impact? Is it about cultivating informants, or creating cooperation?

*Raising awareness* can expose the access points of municipal government to residents. But simply knowing where and how different forms of information exchange take place does not resolve the external questions of motivation or desired outcome. This means building out relationships is crucial for municipal agencies to reach the public. For example, R29 describes his work on a city-wide project that is meant to transform many neighborhoods with access to green space, transportation options, and affordable housing: “*I believe I are a new neighbor. I move into a part of the Beltline that I haven't been before, we're now a neighbor because we're not going*

*anywhere. we're there for the long haul. So, as a new neighbor, how can I get to know my neighbors?"*

As their work of building this new infrastructure takes them from neighborhood to neighborhood, they recognize they lack relationships with residents who may be uneasy about the coming changes.

To address this gap, R25 talked about *building relationships* in a proactive manner: *"I host a Saturday, anybody-come-kind-of event and people come with their kids, their grand kids. They hang out with us... I tell them what we're working on and give them a chance to talk to us about what we're doing and how it affects them."* Hanging out on the weekends becomes a tool for establishing a relationship. The goal of these sessions was not to advance the plan, but to *build relationships* and provide a human access point into the municipal operations responsible for the city-wide project (Marsden, Maunder, and Parker 2008).

*Building relationships often requires* empathizing to understand the nuance in feelings and emotions connected to an issue, rather than just recording the facts or collecting responses from a survey or opinion poll. Understanding local histories and knowledge is very important for some kinds of engagement work: *"a lot of stuff that happens down here is so nuanced that I don't think I'd ever get away from wanting to talk to somebody directly and get a sense of how they felt about something, not just the facts about it"* R31.

The nuance of felt experience points to how the affective qualities of community engagement are predicated on building relationships and connects to how people articulate attachments and begin to work collectively toward political outcomes (C. A. Le Dantec 2016). As an example, R20 noted that when working with residents to get input on proposed plans, *"most of the time these conversations are very emotional conversations, because there are real systemic*

*issues that have plagued most of these communities for a long time. And yet, there's consensus around what needs to be changed. However, there's also the fear that when things change, will I even be able to stay here?"* The emotions, fears, and concerns expressed about gentrification and displacement as a consequence of urban renewal play against a desire to see the area in question improved—as always in urban redevelopment, the question is, “improved for whom?” (Glick 2008). Legitimizing those concerns by taking the time to listen to residents is an important part of establishing trust when *building relationships*.

The challenge comes when residents expect substantial policy shifts, shifts that are often beyond the purview of individual planners or officials sent out into effected communities. One of the strategies my respondents used was to redirect larger generalized concerns toward specific areas where decisions could still be impacted: “... *[I try] to take what they're saying that's important to them, and be able to translate that back to them in a way where you're acknowledging the importance of it, but you're also showing them how it ties into what you're actually trying to find out on that particular assignment*” R20.

The practice of *building relationships* emphasizes the importance of trust and direct, personal contact between municipal officials and the public to whom they are accountable. In contrast to *raising awareness*, which might have a more transactional for departments in cluster 1, the relational work of departments and agencies in clusters 2–4 placed a different emphasis on *relationship building*. However, across those clusters, different agencies’ approach to building those relationships differed: from formal public meetings in the case of planners with clear lines of accountability, to informal weekend gathering in the case of public-private development partnerships trying to build good will. Taken together, these practices are part of establishing

the kind of participation that McCarthy and Wright identify as “[having to] be negotiated and [which] has to be based on a being with that assumes equality from the outset” (McCarthy and Wright 2015). Basing their community engagement in dialog, the municipal officials were creating different opportunities—and sets of expectations—for how their constituents could engage in civics.

#### 4.2.3 Setting the Table

*Raising awareness* and *building relationships* are expansive community engagement practices—they are carried out with the intent of connecting with as many residents as possible. Once we look toward the more specific work of developing or implementing policy or legislation, officials typically need a group of dedicated and reliable residents with whom to work. To that end, *setting the table* reflects the ways in which municipal authorities assemble stakeholders and distribute power amongst them in decision making processes. This requires balancing between institutional actors, operational needs, and the procedural, political, or economic constraints in a given project.

To achieve some balance, officials recognized the need to curate community participation. However, in doing so, they also recognized the uneven concentration of influence across different communities, describing it as: “*the voices of a few making decisions for many*” R6; or noting “*typically, you're getting the outliers. You're getting the people that are complaining and you're getting the people that are praising. You don't get the people that are in the middle*” R33. Such observation by municipal officials begins to show very bluntly how community engagement practices shape participation—a desire to get “the right” people involved can be political expedient as easily (or more easily) as it can be an intentionally inclusive practice.

In some of the city's low-income communities marked by a dearth of leadership or stability in counterpart community-based organizations, municipal officials had to piece together resident participation. *"There are some very, very poorly run organizations and business in some of these communities. And you got to know who those folks are, but if you don't know their track record, you could get down the road with someone like that, and it could cost you your reputation. It could cost you a lot of time, resources, and a failed project"* R26. Likewise, even in instances where stable community institutions existed—like churches—there was a concern that they too unnecessarily narrowed the frame of participation: *"I know people always say, 'Go to community organizations, go to churches.' A lot of people don't go to churches and I certainly don't want church to limit someone. Or certainly want the attendance to church to define whether or not that they can participate and get their voice heard"* R10.

What began to emerge was that *setting the table* was as much about the allotment of power as it was about cultivating participation. This was particularly clear from interviews with the public-private development agencies who had split accountabilities: *"[I need to] balance all the interest for all the parties that I deal with here. So, I'm dealing with the community, but I'm also dealing with the banks who have some deadlines that they have to meet. I'm also dealing with investors who're buying a lot of the investments that go into our projects, and they all kind of have a different mindset"* R27. Similarly, a senior city planner defined success in a project as identifying, *"scenarios for redevelopment that reflect the opinions of the community, that reflect the market analysis, and that really make good planning sense in terms of redevelopment"* R24. In both of these instances, municipal officials were identifying how the political and economic realities weigh heavily against the desires of residents affected by a given project.

Even though *setting the table* was entangled with the politics of urban governance and development, my respondents worked from positions of good faith in wanting to represent the diversity of perspectives and needs within the city. This was particularly true around development projects that were aimed at addressing inequity and resilience. But they also recognized the limits of engagement practices that require time and voluntary labor. R33 in city council reflected: “*there’s only so many people that have so much time to deal with community stuff. Most folks are just trying to go to work, pick up the kids, get the groceries, go to the gym, go to their normal routine.*”

To deal with the constraints of time, and with that the capacity among residents and community organizations to contribute to the work of governance, many of the departments and agencies would provide resources for resident participation. As a practice within *setting the table*, making resources available was a way to ensure participation by residents who might not otherwise be able to—a goal for service-oriented departments like the public housing authority, as well as planning and development agencies. Often, this practice included simple things like providing public transportation vouchers, childcare, or food at evening meetings—efforts to extend basic services to working families that were sought for input in different service and development projects.

At the other end of the spectrum were grant-making practices that functioned as a means of gaining access and as a tool of capacity building. Here, *setting the table* takes the form of financial resources negotiated and arranged throughout various community organizations. Distributing resources this way, and supporting local initiatives was often described as “empowerment” because it aimed to amplify grass-roots efforts aligned with a given municipal

entity, as opposed to introducing new work from outside the community that may lack support or longevity due to the perception of it being a top-down initiative.

Just as ensuring representative participation in public process was a challenge in *setting the table*, so too was achieving equity in the allocation of resources. R18, in the city's housing authority stated: "*because I have limited resources, do you scale up a few people by funding them, funding the same people to gain higher levels of capacity, or do you spread it thinner and do smaller projects?*" The question of spreading resources broadly versus concentrating those resources has real consequences to the kinds of civic engagement municipal agencies are supporting. On one hand, sustained financial support cultivates technical expertise and helps maintain neighborhood or issue-based groups who need to interface regularly with decision-making municipal agencies. Sustained support sets the table with residents able to contribute over a long period of time and with insight into both their community needs *and* into the constraints and realities of department or agency work. On the other hand, however, it is easier for agencies to work with groups with whom they have a history rather than starting with a new group—like R26's observation from above in wanting to avoid supporting a community group or business that ends up "*cost[ing] you a lot of time, resources, and a failed project.*" This can become a cyclic process where *setting the table* becomes a gateway for participation, entrenching power and influence among a small number of residents and community organizations, which makes it difficult to include "everyday folks."

Ultimately, the concerns and practices that comprise *setting the table* have manifest implications for configuring civic participation, as well as mercenary implications for the exercise of power. Distinguishing which community groups effectively use money, or have the

appropriate capacity, or whether or not to provide direct incentives for residents to attend meetings is tied to assumptions about how such civic entities might best serve their own communities, or how development might best take shape, or how to best include underserved residents. As a result, my respondents recognized the perception, and the need counter the perception, that work they did to invite and select participation—specifically in venues where decisions get made—was about money and access to money.

#### 4.2.4 Finding Opportunity

Up to this point, the practices I have described are primarily concerned with how engagement work gets done—the components that make it possible and make it happen. *Finding opportunity* is about the practices that occur once those pieces are in place—when community engagement moves into the realm of active problem solving. A key aspect of this work is building from established relationships and ongoing projects because it allows for discovering opportunities for confronting issues of governance and development in a more fluid manner. R34 illustrated this: “*when we first launched [the revitalization] initiative, we weren't really talking about that playground near that elementary school. But as maybe the first year or two of the initiative was ongoing, the community, particularly neighborhood meetings, more and more, there will just be this insistence: the school needed to have this amenity. So, at a certain point, then I got really, really serious about—not worrying about whether [the school system] would be responsive but just getting the thing done. And I had a meeting with the Parks Department to talk about it, and they were like, ‘Well, I do have this strip of land that isn’t used. Can we use it?’ And somehow or other magically, whenever, three years ago, the city agreed to fund like a \$100,000 new amenity for the neighborhood.*”



The desire for a new playground was discovered with the community as a part of an ongoing dialog with the neighborhood. The way R34 described the development illustrates some important elements of the broader work of *community engagement*. In describing the route to the deciding upon and working toward a new playground, there is clearly *relationship building* underlying the interaction with the neighborhood group—an active dialog, listening to their needs and responding in a participatory manner (McCarthy and Wright 2015). What also comes clear is the temporal element to engagement work where *finding opportunity* took one-to-two years of interaction with the community. This is an important point to tease out, particularly in distinguishing the kinds of engagement practices that orbit service departments versus those that compose planning and policy-making. The first require engagement practices that are more immediate, providing effective feedback channels to residents as they interact with city services; the second occur over longer periods of time and needs support for establishing relations, including building trust, and setting up effective channels that enable residents to participate in policy creation and implementation.

In the same ongoing engagement that lead to the new playground, the issue of food access also arose from community dialog: “*when you're in that part of town, it's hard to imagine that you're in the middle of a food desert. Technically, you're not because of the way the census tract works and where local groceries are. But the fact is there isn't any grocery store right in the middle of the community that is affordable that provides healthy food at a decent price*” R34. In this case, addressing the issue required the municipal entity—the office of a city councilperson—to coordinate with a nonprofit, brokering a new set of relationships that led to the establishment of a neighborhood food co-op. Here the engagement work went beyond in-house services or

processes, and instead shifted to actively connecting a constituent base to an organization who could work with them directly to address their needs.

When the pieces are in place—awareness, relationships, and working coalitions—community engagement pivots from the one-way communication practices and service transactions, to collective efforts to address issues and co-create a civic imaginary (C. A. Le Dantec 2016; McCarthy and Wright 2015). The characteristic of these forms of *community engagement* on the part of municipal officials invite in and support sustained engagement on the part of city residents. The point to attend to is that the development of productive forms of community engagement is tied to forms of sharing power and empowering communities that arise out of a combination of engagement practices developed over time.

#### **4.2.5 Using Technology**

Finally, cutting across the different community engagement practices described above are the ways technology factored into the work. Whether as a tool to manage communication or enable service interactions, different purpose-built and commercial software platforms were critical to getting the work done. Often, the desire for technology was based in a need to make work more efficient. However, as pointed out above in *finding opportunity*, efficiency can be at odds with the needs of residents where awareness, relationships, and shared responsibility take time to develop (Parker et al. 2008).

Many of my respondents understood the challenge of turning to technology to mediate different kinds of engagement practices. Different interviewees raised a variety of concerns when it came to the reach and limitations of using technology to reach residents. Social media or other on-line outlets in particular led to conflicting concerns: “*The main challenge with having*

*only online-based is that many of our residents are older, and I don't want to exclude their participation*”R1; versus, “*As a city, we’re significantly limited in our ability to reach young people, because we don't have that many young people following us on Twitter... Maybe a lot of young people use social media, but they're not checking on the city Facebook every day.*”R16.

Despite the generational differences in how people seek information (Sims, Reed, and Carr 2016), skepticism of the reach of technology to a plurality of constituents remained with fears that on-line channels would fail to reach both the young and aging populations of the city. As one city council person noted, “*Internet technology can help you get the information quicker, but being in front of someone, being able to see these emotions, get a hug, get a handshake, eat over some bread and some food... That's going to get you a little further*” R33. The observation here is rooted in the relational work that comes from being an elected official and highlights the way digital media are interpreted as transactional tools for information and service exchange, rather than tools for establishing connection within different constituencies.

On the other hand, for the service-oriented departments in group 1 (see Table 1), using technology was viewed as a way to dramatically optimize their engagement work. For instance, R13 described the potential benefit of deploying sensor technologies to improve engagement with the department’s recycling initiative, “*We’ve installed actually RFID readers on each [recycling bin], so that I can determine through data what areas of the city are participating more than others, so I can focus our education and outreach in those areas... to assist us in meeting [recycling] objectives.*”

While the use of smart-city technology described by R13 can help the department of public works focus education and outreach, it is important to consider how technology can shift the

larger fabric of city-scale civic relations. For instance, the same department also runs a website and mobile platform for fielding service requests: *“We get feedback from the system, which is the heaviest utilized tool for customers to relay their needs to us. And in terms of us turning those requests into deliverable services, we track our efficiency and our response, and I do it on a daily, weekly, and monthly and annual basis, so that I can make sure our resources are aligned in the right places to meet we established minimum levels of service”* R13. In contrast R34 in city council reflected on that same system: *“when people touch their government that way, I think that's really super cool. The one challenge for us is... it deprives us of information about what people are caring about in the district... one of the things that is true about the council offices before the arrival of the app is that we were very basic constituent service... My water bill is wrong. Help me correct my water bill. There's a pothole. I need the police.”*

In this case, using technology in order to improve the transactions of service delivery in one department comes into conflict with the relational work in another. Where the council person used to be the avenue for addressing service breakdowns, their job shifted such that *“over time, maybe the council offices get to focus a little bit more on public policy.”* R34. It is not the ability to focus more on policy that poses the challenge, but the deprivation of an important way council interacted and built relationships with their constituents so that policy might better reflect their priorities. Being able to solve a problem with a water bill or fix a pot hole helps build trust both through the personal interaction and through the more immediate feedback, this in turn renews commitment through the longer-running policy-focused processes that require community participation.

The above trade-off ties into the larger move toward e-government initiatives and their

ability to overcome the limits of time and space (Silcock 2001)—freeing residents from the constraints of evening meetings, or the crowded polling place. But those are infrequent civic encounters that are bookended by the longer, messier forms of interaction that both require and gain something from being face to face. Supporting Korn and Volda’s call for “friction” as a tool to reach the “ideal of the ‘more active citizen’” (Korn and Volda 2015), the inefficiencies of interpersonal *community engagement* provide the relational and affective support necessary for broader participation in governance.

### 4.3 Discussion

*Community engagement* is not a totalizing concept or form of work, but rather a sociotechnical assemblage of many different practices and goals, technologies and relationships; some of which are at odds with expectations residents have about being engaged. The practices of *raising awareness*, *building relationships*, *setting the table*, and *finding opportunity* each have their own trajectories and ways of inscribing the work and outcome. From on-line tools and metrics to assess efficiency and target programs, as R13 in public works described, to dedicated programming to build informal ties to residents through listening campaigns like those hosted by R25 in regional planning, this varied work traces Nicolini’s observation that practices are “durable and connect with each other across space and time” (Nicolini 2013).

However, despite this durability, the divergence between how practices are carried and how goals are pursued reveals the “mess” in civic institutions. For instance, how one department will go about the practice *raising awareness* in a manner that is different from the other departments—focusing on one-way communication as many of the service-providing departments did, versus community input as did the planning-oriented departments. These variations exist between

departments (or even within the same department) based on the preferences and skills of the organization and individual doing the work, as well the characteristics and demographics of the community and residents being engaged. This is perhaps one of the most distinguishing features of the hinterlands of engagement; the variety of inscriptions in the form of organizational accountabilities, and the fractured state of modalities for conducting the work, prevent a routinization in form which slows the proliferation of community engagement: it is individually and organizationally costly, produces uneven and dense results, and so is willingly confined to simple modes of one-way communication simply as a matter of task management.

But if community engagement is the vehicle by which residents are invited into participation the mundane, instrumental, and expeditious characteristics of task management within a large organization complicates the building of sustained resident participation in creating a civic imaginary (Gilbert 2013; McCarthy and Wright 2015). While some practices work at cross purposes (*i.e.*, shifting points of contact from elected council people to web applications tied directly to service departments), it is more the case that municipal officials struggle with how to transition across different engagement practices and the concomitant shifts in expectations and accountabilities.

Particularly for departments in group 2 (policy and planning), moving between *relationship building* and *setting the table* and *finding opportunities* creates tensions as groups of constituents are included or excluded at different times and the immediate needs for gathering information rub against the long-game of building community capacity to more actively participate in the planning process. The lack of standardization within my field site also meant that as municipal officials negotiated the difference valences of community engagement, there was no stable

boundary to traverse. As a result, the work to manage these shifts was less like managing boundary objects (Star and Griesemer 1989), and more akin to articulation work (Schmidt 2008)—where additional, hidden labor was required to constantly negotiate the conditions and output of interfacing with the public. The frustration for my respondents was in part due to these hidden forms of work, but also because they understood the public’s desire and motivation for wanting to be engaged (e.g., (Arnstein 2007; Emler 2014; Neumark 2011)) but were frustrated by how that engagement unfolded because so much was the result of invisible labor.

#### **4.4 Implications for Design: Sociotechnical Components**

The above discussion implies designing with trust should approach community engagement as sociotechnical work that configures civic relations across an assemblage of *practices*, *artifacts*, and *social arrangements*. The impact of online services (a digital artifact) for connecting to public works instead of going through elected council people illustrates this assemblage. While the former might fall squarely under what might otherwise be called e-government (creating online government access points for service delivery and provision (Ingrams 2015)), the latter has clear impact on the degree to which residents are connected to their representatives (social arrangements). That city council *builds relationships* (practices) through the contact that arises from the mundane work of helping pass along reports of potholes or clogged gutters needs to be a consideration in the overall efficacy of municipal operation when instituting digital interfaces that displaces that moment of interaction.

In sum, I argue the first key element for designing with trust is attending to the assemblage of artifacts, practices, and social arrangements of a particular civic context. This necessitates a sociotechnical perspective which realizes that “trust cannot be designed into a system” as the

trust HCI scholar Riegelsberger once remarked; however, “*designers can aim to create optimal environmental conditions for the emergence of trust, but they cannot fully determine users’ behavior.*” By examining the assemblage of artifact, practice, and social arrangement, we can begin to trace how trust moves and shifts within and across the present components.



## CHAPTER 5: Understanding Distance and Trust Work

The work in the previous chapter made it evident that trust is vital to supporting (and enabling) the relationships created by different practices of community engagement. In fact, trust seemed to be its own distinct form of work within community engagement; the work of establishing trust, or more frequently, overcoming distrust between public officials and city residents. Despite the prevalence of trust revealed in the previous chapter, I noticed that trust was understudied from the perspectives of public officials. To address this gap, my research question was: *How is trust operationalized in the work of community engagement?* This work relied on the same ethnographic data gathered in my initial fieldwork. In my analysis I describe how trust develops as a process with distinct stages that are progressed with practices I called “*trust work*.” This work is performed by public officials in order to overcome various manifestations of distance in their civic relationships with constituents.

### 5.1 Methods

In this project, I used the same semi-structured interviews spanning multiple departments and agencies within Atlanta city government as part of the Living Cities project (Living Cities 2015). However, the work in this chapter presents an original analysis of these interviews focused on how trust factored into community engagement: including what the role of trust is, how it is obtained, if trust currently exists within their relationships with residents, if not why or if yes, how so. For this project, I re-analyzed the interview data following Charmaz’s guidelines for grounded theory (Charmaz 2014)—first completing open-coding of the data followed by focused coding to pinpoint and develop salient categories. This inductive portion of

my analysis resulted in the following concepts: eight practices that were important for trust in citizen participation, the temporal order of these practices according to where in the process of participation and trust they needed to occur, and several institutional and interpersonal trust characteristics. I noticed there was a common theme throughout the practices: distance. Practices would often be described in relation to overcoming some form of distance: physical, social, power, etc. In order to account for this common attribute, the deductive portion of my analysis drew from social psychology—using the construal level theory of psychological distance (Trope and Liberman 2010) as a lens. I found this was instructive in explicating what was at the core of the practices I found and thus allowed me to relate the practices more richly to trust theory concepts such as risk and expectations.

## 5.2 Findings

I organize my findings around what I call *trust work*: the ways in which public officials establish and maintain trust. I describe *trust work* through eight exemplary practices that arose through my inductive analysis: *meeting people where they are*, *community education*, *participation in goal setting*, *setting expectations*, *being present*, *managing expectations*, *shared decision-making* and *sustaining engagement*.

In order to organize the practices identified through my fieldwork, I structure the findings around two frames: distance, and process. For distance, I rely on six dimensions: social, temporal, spatial, hypothetical, power and knowledge (the first five are derived from the literature (Magee and Smith 2013; Trope and Liberman 2010), while the final arose from my own fieldwork). The goal of *trust work* is to reduce different manifestations of distance—the distance in power of decision-making, distance as social closeness or temporal distance in reaching civic goals—

between public officials and citizens. Distance presents risks that *trust work* needs to overcome; however, each measure of distance is along its own vector, so even as one area converges on trust, others might open up. As a result, *trust work* should be viewed as an ongoing process. The second frame I use is process which describes different stages of trust (Rousseau et al. 1998). For instance, there are practices to initiate trust, practices that prove trust, and practices that retain trust. These stages help describe a trajectory of establishing, building, and maintaining trust. The trajectory helps us describe how officials traverse different vectors of distance over time in their efforts to develop and deploy trust.

In all, the eight practices that emerged from my inductive analysis provide a bridge between existing theories—of distance and trust process. In turn, those existing theories help us organize and present the emergent practices that arose from my fieldwork. Taken together, my findings and my analysis with respect to extant theories of trust provide a conceptual framework a conceptual framework to describe the different kinds of work that go into building and maintaining trust between citizens and government.

### 5.2.1 Initiating

*Trust work* at this stage initiates the trust process with the practices: *meeting people where they are, community education, participation in goal setting* and *setting expectations*. These practices begin to traverse distance in social closeness between community and public officials, distance in knowledge of participation processes or distance in decision making power.

In this stage, the distinction between the role of interpersonal and institutional trust is most clear. As P21 in the city housing authority describes, “*Trust is obtained in two ways: one, it comes from as an organization, does that community trust the city? And then the second part of it, does*

*that community trust the person who's speaking and managing that engagement process?"* First, there is trust in the institutional relationship, followed by trust in the interpersonal relationship. Trust is a product of both of these but the order in which each operates is important, as I illustrate below.

For instance, the relationship at the institutional level configures participation and conditions how trust is built. P42 in regional planning illustrates this, *"Well, one of the first challenges is when you go into a community that may only be aware of your name, you have to build trust. You have to go in and establish that. That depends on the level of the individual's knowledge and awareness of your organization so that will determine how fast we're able to start our process."* Identifying the distances of knowledge and social awareness that must be traversed in order to build trust, P42 makes clear the interaction between interpersonal and institutional trust. In situations where individual trust is absent, institutional trust is important to scaffold the trust building process (Möllering 2006).

In situations where institutional relationships are frayed or just being established, *trust work* must first operate interpersonally. The primary practice describing this work is *meeting people where they are*, which is how public officials go out into the physical and social worlds of residents in order to establish relationships. P21 in environmental planning describes the practice as, *"sitting down, like we're sitting down now, at their kitchen table and talking with them."* By moving into the environment of their constituents, rather than staying within the offices or domains of the municipal institutions, the officials are removing barriers of authority. Doing so acknowledges that the onus is on the public official to go out and start the process, conveying their own responsibility in closing the distances between themselves as public officials and the

residents whom they are representing.

During the interviews, there was often a strong preference for face-to-face interactions when meeting people where they are. This is due to the kinds of distance the practice traverses: spatial-physical and social. Spatial-physical distance shares a strong associative relationship to social distance (Trope and Liberman 2010) and both are tied to building trust as trust is often directly reciprocal to social and physical proximity (Barber and Gambetta 1992).

Connecting trust and distance reveals the importance of face-to-face interactions in meeting people where they are. P7 in city council illustrated this when contrasting face-to-face with digital interactions, *“Internet technology can help you get the information quicker, but being in front of someone, being able to see these emotions, get a hug, get a handshake, eat over some bread and some food, then people will kind of buy.”* This makes sense as trust in the initial stages is more reliant on interpersonal trust which is built reflexively through affective exchanges that are more easily accomplished in social and physical proximity.

P7 further illustrates this when describing legislation he passed in order to provide home-repair subsidies to prevent gentrification in an area of the city under-going rapid development. His office was surprised at the low-levels of utilization of the funds—he speculated that institutional distrust of city hall was the cause. The solution for this was meeting people where they were: *“It didn't work until I walk the street, knock on doors, take some time, in the cold, in the rain, “Yes ma'am, that's why I'm out here. I love you, I care about you. You need to stay in this town. I grew up in this town. Yes ma'am, we're going to do it the right way, yes.”*” Knocking on doors and walking the streets to engage in conversations each contribute to the work of meeting people where they are. Although, meeting people where they in initiating may be the most labor

intensive, it is also foundational for the rest of the process.

While meeting people where they are traverses spatial-physical and social distance, the practice of *community education* traverse distance as knowledge. This practice is how public officials bridge gaps in citizen knowledge important for participation. This can include technical, domain specific knowledge such as planning or financial terminology, or it may be procedural, helping residents understanding a department or civic process sufficiently enough to interface with it. Regardless of the form, distance as incomplete knowledge produces uncertainty and risk that is problematic for trust. P11 in public schools describes how this distance is a barrier for participation, “*You can't go and engage someone on something that they know nothing about.... the face of education changes so much, the acronyms that I throw out there.*” Distance in knowledge as P11 describes is not static—technical domains develop (in this case the education system) and the practice of community education is necessary to traverse gaps in knowledge as they (re)appear.

An example of how community education is carried out by public schools is described by P11, “*We use robo-calls, we do town halls, we use social media as a means of engaging the community. We have our own cable news channel, and that allows us to like run some information to support that. Our website has a plethora of information...*” This approach to community education is multi-modal, occurring through different media in order to reach different segments of citizens simultaneously. It is also worth noting how some of the media (town halls and social media) work on the interpersonal level whereas (news channel and website) operate at the institutional level. The challenge with mediating community education on the institutional level is that these can seem impersonal as P10 in city council describes his opinion of the city’s

website, “*The [website] says, “Click here,” and the next thing pops up on the screen, “Click here. Fill in this. Click here.” That’s impersonal.*” So, while websites could serve as a source of information to reduce distance as knowledge—by nature they are socially distant, which presents a barrier.

The school system’s community education is atypical in both its scale and reach given how large the institution is. More typically, community education is carried out in meetings where public officials make presentations on the relevant information then engage in open conversations. P35 in the city’s planning office describes her method for community education regarding a large development project the city was embarking on: “*Because you have built a relationship with the people in the community. You come out, and you don’t talk to them in a condescending manner. You understand what your audience is, and you’re relatable.*”” Being relatable and understanding your audience turn on interpersonal elements of trust and are key aspects in the practice of community education. This calls attention to the interplay between social distance and knowledge distance. P35’s social closeness underlies and enables her community education efforts. This has implications for how different forms of media emphasize either personal or institutional relationships. Community education is done on both levels but depending on the current level of trust—one may be more effective in traversing distance as knowledge.

Moving along from distance as physical, social, and knowledge, there is also distance in power. A practice that emerged from my fieldwork that was deployed to traverse distance in power was *participation in goal setting*. This practice reflects how public officials involve citizens in determining goals for projects, programs, and services. This is the opposite of how typically goals are pre-set before participating with citizens. This can be problematic for trust as described

by P43 in public health, *“If you come in and you already have a plan, you've probably already lost some trust. So, trust can be gained by engaging the community from the very, very get-go. It can be lost if decisions are made there and the community wasn't part of those decisions.”* Here, P43 emphasizes that the trust process is already significantly handicapped if participation in goal setting does not occur. This is because distance in power is at the core of citizen participation—power is both the goal and essential challenge for participation. The extent to which citizens (and “which citizens”) have the power to influence plans and make decisions have long been a concern for scholars considering civic participation (Arnstein 2007). Power is also significant for trust—as the act of trust grants discretionary power while accepting the risks involved in doing so (Warren 1999).

Participation in goal setting is accomplished by having initial, early, exploratory conversations in order to give shape to goals. Typically, this occurs through focused and targeted conversations with community leaders or by forming advisory groups. While ideal, challenges arise with participation in goal setting for public officials when the constraints of budgets or departmental objectives create non-negotiable goals. In these cases, institutional transparency is vital as it lays bare the constraints limiting goal setting. At the interpersonal level, honesty becomes important in how clearly the public official can convey limiting factors.

The last distance traversed in initiating trust is hypotheticality—the sense of how likely an event or idea will occur. So, a highly unlikely event is hypothetically distant whereas a highly likely event is hypothetically close. This distance is addressed with the practice *setting expectations*. This practice describes the way in which hypothetical distance is framed by public officials in participation. P39 in parks and recreation describes this as follows, *“You tell them*



*early on that I'm more than happy to help, but these are kind of my limitations that I'm working within, and so even though I can help you, I'm not actually got to be able to build the park. I can help you plan this park. I don't have the \$20 million it's going to take to put this plan into action."*

In this case, risk is presented in the goal of developing a new park. This risk stems from hypothetical distance—as P39 states neither herself or her department can guarantee participation will lead to the park being built. The role of trust here is to bracket the risk presented by hypothetical distance by coming to positive expectations. This is important for citizen participation as goals are often hypothetically distant: revitalizing a neighborhood, preventing gentrification, or addressing systemic violence for instance all entail a great deal of risk and complexity in addressing. Therefore, enabling participation to address these issues will need to overcome their hypothetical distance.

While forming positive expectations is key for trust, these expectations must be grounded as P18 a director in the city economic development agency describes, *"you cannot over-promise and under-deliver. You have to manage expectations. And I think a lot of times when people are involved in community engagement, they will say what they need to say at that moment to get the room settled, as opposed to being honest."* Here, rather than saying what is immediately expedient to enable participation, the practice setting expectations requires honesty, transparency and "thick-skin." The challenge lies in "who" promises and "who delivers" as expectations are always entangled between interpersonal and institutional logics. The interplay between how expectations are met (or not) have significant impact in the next stage of the trust process.

### **5.2.2 Building**

*Building trust* reflects the prevailing view of trust among public officials as the eventual result of delivering on the expectations that were set when initiating trust. This is accomplished with the following the practices: *being present*, *managing expectations*, and *shared decision making*. As mentioned in the previous section, one of the challenges in building trust is when interpersonal expectations are misaligned with institutional constraints: budgets, staff resources, legal statutes, and bureaucratic process. This sets up a conflict for interpersonal trust which relies on integrity, performance, and predictability. The paradox is that stronger trust relationships are more resilient to these kinds of challenges, but developing a strong sense of trust first requires overcoming these kinds of challenges (Lewicki, Tomlinson, and Gillespie 2006). P18 in the city economic development agency describes the need for this clearly, “*you can't engage people who don't believe in what you're saying. It's just that simple.*” This belief rests on both on institutional and interpersonal trust as officials have to articulate the goals of their department with the public as well as their personal commitment to seeing those goals through.

Of course, belief in P18's institutional objectives comes with uncertainty for residents, especially for those who might be susceptible to gentrification that might be spurred either (intentionally or not) by her department's economic development efforts. This is where trust comes into play as it enables belief allowing for action and cooperation in situations of incomplete knowledge, uncertainty and thus risk. But trust must be earned gradually in process over time with practices that build trust.

The first practice in building trust is *being present* which is how public officials maintain social and spatial-physical presence in communities. Being present continues the relational work started previously in meeting people where they are but here the emphasis is on how progression

of social closeness is achieved over time. It is this progression that eventually blurs the distinctions of “those in power” and “citizen.” For this reason, being present precludes meeting people where they are—the former prevents the distance that necessitates latter. Put simply, if you are present you are already “there.” In this way, being present presumes a greater level of trust which changes the scope of possible actions. This leads to the transition from calculus based trust that characterizes trust in the initiating stage to relational based trust which draws on emotional history (Rousseau et al. 1998).

Being present is accomplished by regularly attending events held within the community, maintaining ongoing conversations and being aware of what is important outside of the needs for participation. This last point is emphasized by P41 in environmental planning, “*you go to their meetings whether you have something to say or not. Find out what they're generally concerned about.*” Here, P41 points out the value of being present in a non-transactional manner—not just because there is a specific request that needs to be made or task that needs to be completed. Doing so conveys benevolence and partnership in addition to predictability which are key indicators of trust in both its institutional and interpersonal forms.

Being present in this manner is proactive rather than reactive as P12 in public schools describes, “*most of our community engagement is reactive, to get a response on something or feedback on something, when it could be more just listening and being more out there. Then, eventually, based on the trust that you build in the communities, then you can talk about solutions. But before requiring feedback, maybe just be there and be available first.*” The challenge with proactive engagement is it can be time and labor intensive. This leads to public officials exploring technology use as means to being present in a more efficient manner.

Use of technology always involves weighing the tradeoff between the efficiency of digital/asynchronous interactions on one hand and the value of the affordances of physical/synchronous interactions on the other. P21 in the city housing authority describes this in her contrast of social media use vs face-to-face interactions, *“I do think that, while social media can be great and mailings can be great, that one-to-one relationship is really the most key, the most important.”* However, even though digital media do not allow for the same affective quality of in person, one-to-one interactions, they were recognized as being an important way to amplify connection as P7 in city council describes: *“websites like Nextdoor, the good thing about those type of programs, just like Facebook you can set a notification schedule or tickle or something that says alert if it says MY NAME or alert if it says crime in progress or shooting or whatever you think is an emergency you can do that. Otherwise my staff monitors it.”* The use of social media to connect to residents has risen rapidly in Atlanta (Masden et al. 2014). These serve as another channel for being present that traverse social distance in a much more efficient way than in person. P7 highlighted some of these affordances such as notifications based on keywords and multi-user access on personal accounts allows. These allow for more tactical presence as well as allowing presence to be extend. However, being present digitally is always done in addition to being present physically as many public officials fear issues of equal access limit the reach of digital presence. This requires a one-foot-in, one-foot-out perspective to being present. P7 in city council describes this, *“I think technology is one thing, but everybody doesn’t have access to technology. I have to go HiFi, LoFi. I got to go high-tech and low-tech. Super low, like knock on doors.”*

Overall, it seems digital media become more relied upon later on in *trust work* as P41

describes, “[building trust is] *that front end loaded activity, level of activities that is important to build that trust and to bring awareness to a process that will yield participation, and fruitful participation for a project. You can't do it digitally first. You can do it along the way, but you can't start out in a digital capacity.*” This was also evident in the contrast between technology use in meeting people where they are and in being present. In meeting people where they are, *trust work* leans heavily upon interpersonal trust which is built through affective, face-to-face interactions whereas later in building trust stage when some trust is in place, trust can begin to work through history or institutional familiarity. This shift de-emphasizes the need for the affordances of interpersonal communication that digital mediums lack.

Next, there is *managing expectations* which builds from the early work in setting expectations but here the emphasis is on how expectations can persist in the face of challenges and setbacks in this later stage of trust building. P8 in city council describes a typical scenario in which this practice becomes important, *"let them know, "Yeah, I will try to get that pothole fixed, and these are the steps that are associated with doing that...And if you can't get the pothole fixed, it's bad."* Failure to fix the pothole may reduce the probability of achieving the goal (which increases hypothetical distance) as well as extend the timeframe of reaching it (increasing temporal distance). Moreover, as distances are associative (Trope and Liberman 2010) others might be implicated: social distance might grow, distance in knowledge might feel greater or distance in power might feel more pronounced.

On the other hand, failure to reach a goal does not always have to lead to reduced trust. In fact, trust process theory views overcoming challenges as key opportunities to building trust (Mollering 2006). Doing so successfully requires managing expectations in such a way that holds

trust in place even as hypothetical and temporal distance are extended. However, to achieve this transparency of institutional forces at play, honesty at the interpersonal level needs to be able to provide visibility and subsequently accountability.

In these situations, the institutional relationship is brought to the forefront with public officials mediating the bureaucracy on one hand and citizen confusion and anger on the other. In order to continue managing expectations, accountability must be visible and this applicable to both interpersonal and institutional trust. But this starts at the interpersonal level with the public official taking ownership as described by P18 in the city economic development agency, *“if somebody distrusts the work that you've done... You've got to reset. Perception is reality. You know, whether I did it or didn't, if the perception is that I did it - I did it. And so, what I have to do is start over.”* P18 must contend with the challenge of trust being a subjective experience; with trust perception *is always reality*. Moreover, in the same way trust as positive expectations can reduce distance, distrust is just as powerful in working in opposite.

At the institutional level, this means making organizational changes to put forth a structure that affords accountability. P44 in the city workforce development department describes her department's experience with this, *“We had to rebuild simply because the Atlanta didn't trust this agency. They didn't trust us with federal funds. They didn't trust us with their kids. They didn't trust us to help them get jobs to help them be able to take care of their families.”* Ultimately, there is a limit to how far trust can be built interpersonally if the institutional relationship has gone too far into distrust. This is the challenge that many of our institutions face in the crisis.

Finally, *shared decision-making* continues traversing distance in power. As the trust process continues to develop over time, reducing distance in the form of power requires public officials

defer and allow citizens to share in decision-making authority. Shared decision making presents a risk for public officials—as they cede power institutional objectives and constraints may be compromised. This produces vulnerability for the public official but doing so is key to building trust: stronger trust relationships are characterized by mutual vulnerability. In this way, the trust process is a two-way street: risk is present in both directions thus making both sides vulnerable. P28 the director of a city-wide infrastructure development describes how a discrepancy in his department’s work presented a typical scenario for shared-decision making: *“residents in a neighborhood on a project we were working on discovered something that they questioned that we might have missed on what we were doing.”*

For context, P28’s department is fairly new and the work controversial as many fear the development efforts will lead to wide spread gentrification. To overcome both the uncertainty their work presents as well as the unfamiliarity of their department —P28 had engaged in much of the earlier *trust work* practices: meeting people where they are by going out to residents and having conversations, providing community education through various workshops and presentations, setting expectations on development efforts, and remaining present socially through the community. Thus, they had traversed distances and built trust to some degree. However, in order to complete the transition into the next stage of trust, distance in power must be reduced. P28 describes how his department traversed distance in power in this case, *“After evaluating it I had to make the decision to tell my team, we’re going to side with the neighborhood on this.”* While reducing power in decision making may be more recognizable when it occurs in formal processes and mechanism—privileged moments—they can also arise in points of unexpected friction and risk (Korn and Volda 2015). However, it is in these opportunities that

trust is built most convincingly as P28 reflects, “*again, that's about relationship with the community, as opposed to just an exchange with the community.*”

After initiating trust by meeting people where they are and sharing power, followed by building trust through consistent presence and doing the things you said you are going to do, both interpersonal and institutional relationships may now be established, but trust is not fixed. Rather than introduce additional practices, I highlight a high-level strategy—*sustaining engagement* that is used in order to *retain trust*. In adopting this strategy—an ecological perspective towards trust is advanced.

### **5.2.2 Retaining**

*Sustaining engagement* manages the erosion of trust from temporal distance by repetition and consistency of participation efforts. Whatever the mode of participation—weekly conference calls, bi-monthly planning meetings, end of the month happy hours, quarterly work-shops—it needs to be held stable over time. P42 in regional planning describes the importance of sustainability, “*we as people who engage communities, we can't afford to just do this one-off type thing. It's about building relationships, it's about building trust. That comes over the course of a period of time.*” Throughout the interview data sustaining engagement was important to public officials because they believe it produces predictability. Predictability is significant for trust—in fact it is one of the most powerful trust enabling characteristics such that it can even override missing or deficiency in other characteristics (Mcknight and Chervany 2000). The importance of predictability seems appropriate as predictability makes the process of forming positive expectations less uncertain (Mcknight and Chervany 2000).

Outside of producing predictability, sustaining engagement suggests taking an ecological



perspective to *trust work*. As I have shown this far, trust exists as an ecology: of people and institutions, of distances and uncertainty, as expectations and power. All of which are subject to growth, evolution and regression. This is especially true of relationships: public officials move in and out of power, departments adopt new policies and citizens move in while older long-time citizens move on—making many civic relationships transitory. For instance, P10 in city council describes the role of temporal distance in (re)producing social distance by way of the cycles in people’s availability for participation, “*you get particularly volunteer leaders... [where] there may be other stuff going on in their lives, and so they're checking in and they're checking out of the opportunities for the trust.*” The flow of time and people and contexts combine to (re)produce distance in relationships between public officials and citizens making trust difficult to hold in place.

All of the elements of the trust ecology—when aligned through *trust work* create a state of trust but retaining that trust depends on sustaining engagement. P28 infrastructure development in describes the dynamic nature of the ecology, “*You got to work your way through it to create that environment, and it's never static... Just because you had a good experience last month, makes no sense to assume they're going to have that same experience next month... we're going to keep nurturing that conversation and that relationship, so that it forges into something lasting.*” Sustaining engagement is necessitated by the growth and flows of distances. P28 also points to how sustaining engagement eventually “forges into something lasting.” This ‘*something*’ is institutional trust. While more difficult to build, trust in this form is ultimately more durable over temporal distance in comparison to the mortal limits on interpersonal trust.

Sustaining participation is of course time and labor intensive especially given the preference

in much of *trust work* for face-to-face interactions. P19 in economic development speculates on the use of virtual meetings to overcome this challenge, “*could we use technology to meet instead? What if we’re able to have that same meeting, cut down your travel time, cut down the cost for food, things of that nature, get cut straight to the chase.*” The paradox here is that communication technology is essentially a means to overcome distances—spatial, social and temporal. Moreover, in the face of limited staff and budgets—technology could improve both *trust work* and participation by allowing more opportunities for interaction in a more efficient manner which would lead to greater sustainability. However, the paradox lies in how trust as I have shown requires time and therefore efficiency as value is almost diametrically opposed to the needs of trust. In this way, *trust work* is more akin to what Gordon describes as meaningful inefficiency (Gordon and Walter 2016).

### 5.3 Discussion

In this study, I wanted to understand how public officials “did” trust, how they thought to enact trust in practice as they engage the public. By relating the various practices described by public officials in my study back to uncertainty, I was able to develop a novel conceptual relationship between trust and distance. ‘Meeting people where they are’ exemplifies this relationship; in performing this practice public officials sought to reduce uncertainty by closing spatial and social distances in their civic relationships.

‘Meeting people where they are’ was one of eight practices that comprise the notion of “*trust work*” I developed: the relational work of closing distance in civic relationships to develop trust. Each of the practices works at closing different dimension of distance—distance in decision-making power, distance in space or social closeness, temporal and hypothetical distance in

reaching civic goals, or distance in civic knowledge—which create uncertainty in the civic relationships between people and their representatives. As prior literature and my findings have shown, these distances are associative; therefore, efforts to close any single distance should consider the implications for the others. This was clear in how the practice of *meeting people where they are* needed to traverse spatial-physical distance to address social distance. I also saw how *setting* and *managing expectations* presupposes traversing distance as knowledge. In *community education*, social distance helped to close distance in knowledge.

Trust work and distance sets up a conflict with the dominant neoliberal design logic which focuses narrowly on the value of technologies for their ability to drive down cost through improved service transactions and efficiencies. This conflict was most evident in the contrasting perspectives of the value of ATL 311 for Public Works and city council. The perspective from city council points reflects concerns of how the system created distance in his relationships with constituents by removing points of contact. While efficiency is important, what my findings suggest it is only one vector against which to optimize in the civic context. I argue distance—closing distance—represents another vector; one which is increasingly important to optimize in the present crisis in trust.

To optimize for closing distance through civic design requires escaping the hold of neoliberal design logic. Indeed, according to Gordon and Wright this logic presents a danger as it constrains “the application of technology to civic life purely for its expediency, transactionality, and instrumentality” which in turn sidelines “other uses and users” (Gordon & Walter, 2016) p-244. As a result, what is often ignored is technology’s potential to change the nature of civics relationship between residents and government: the goal of digital civics. By

focusing on distance and the work of closing it, my findings further this goal by providing a focal point for digital civics relationality agenda. Furthermore, my findings illuminate the understudied perspectives of municipal officials who I found do understand the importance of building and maintaining relationships with their constituents, but they are also at the mercy of the systems that get deployed within their work environments. If the tools that support municipal work are only concerned with efficient service delivery, the ability of these officials to interact with the public is constrained.

## 5.4 Implications for Design: Distance

The above discussion has two interconnected implications for designing with trust: first, design should aim to mediate the *trust work* performed to close *distance*; second, design should understand *trust work* as a *process* of initiating, building, and retaining trust.

The first implication suggests that by using distance as a frame, digital civics will be better positioned to produce design interventions that are grounded in and responsive to the crisis. Framing is significant to design practice, as noted interaction design scholar Bill Moggridge once remarked framing creates the first level of order of understanding that serves as the basis for "*ways of thinking about and evaluating possible design ideas*" (Moggridge and Atkinson 2007). Distance frames the end goal of designing for trust as a matter of closing distance which complements digital civics' relationality agenda. Specifically, digital civics cannot assume relationships exist a-priori to design. In fact, as Le Dantec and Fox once noted there is an entire class of work necessary to bring distal communities to the table that is often overlooked or presumed in design practice (C. A. Le Dantec and Fox 2015). Distance as a frame foregrounds design practice in this reality—in the need for the work of closing distance—to bring distal publics

to the table as the starting point for the larger, more transformative goals of reconfiguration. For this reason, distance is the most significant element of designing with and for trust which all of the other elements revolve around.

The second implication is approaching trust in design as a *process* and using the stages as approximations. In this study, I adapted notions of trust as process in order to explain how distances are traversed over time. My inductive analysis ordered the work of traversing distances into three conceptual stages of trust process: *initiating*, *building*, and *retaining*. These stages articulate how the work of traversing distance needs to evolve over time in order to develop trust. I loosely adapted these stages from how trust as process has been described in extent literature (Lewicki and Bunker 1996; Lewicki, Tomlinson, and Gillespie 2006; Rousseau et al. 1998). Even while trust in reality will always be an ongoing social construction—one which will often be too dynamic to fit into a prescriptive process—I argue the stages (even as approximations) are preferable for design as it hedges against the tendency to treat trust as a static value (Möllering 2013a). With this in mind, the second element, trust as process, provides stages as conceptual heuristics to guide design towards thinking through supporting trust as an ongoing social construction (Möllering 2013a) responding to distances that are non-linear and co-occurrent.

## CHAPTER 6: Exploring Trust through Design

The previous two chapters made it evident that despite the importance of trust in the work of community engagement, and the role it should play in the systems we build to support and mediate engagement, trust remains under-theorized as a first order design value. Developing a better understanding of how to approach trust in design is particularly important now in how HCI as field has begun to turn to digital civics as frame for approaching community engagement. Digital civics seeks to design systems based on developing and brokering relations between government and citizen (Vlachokyriakos et al. 2016b); however, if these relations are most often characterized by entrenched distrust, how will design in digital civics succeed?

In order to develop a better understanding of how to approach trust in design processes my research question was: *How can trust orient design of civic technology around closing distance?* To answer this question, I led a subset of the public officials from the Living Cities project through a series of participatory design activities that allowed them to explore how trust could be mediated by civic technologies. This work produced four sensitizing concepts—history, experience, expectation, and preservation—which I later use in my framework to inform generative design.

### 6.1 Methods

I organized a series of workshops with public officials. I recruited 13 public officials representing 12 departments/organizations from within Atlanta's City Government (Table 1). I was intentionally broad in recruiting participants in order to get a wide representation from the breadth of municipal entities that exist across the city. The workshops ran concurrently in three sessions over the course of two weeks. Each session was

<b>Department/Organization</b>		
	Public Health NGO	P1, P2
	Parks and Recreation	P3
	City Planning	P4
	Watershed Management	P5
	Public Works	P6
	Immigrant Affairs	P7
	Economic Development	P8
	Public Safety	P9
	Beltline Partnership	P10
	Parks Advocacy	P11
	Public Health UNIVERSITY	P12
	Regional Planning	P13

**Table 1. List of departments/organizations and participant code.**

approximately two hours and took place at Georgia Tech. One researcher recorded ethnographic field and photo documentation while the I ran the workshop activity. I also audio recorded the workshops which I then partially transcribed to provide additional fidelity to key exchanges identified in my ethnographic notes.

The workshop was designed around the conceptual elements of trust in community engagement I developed in chapter 4. I sought to manifest these concepts into design materials that could be explored by officials. The first of these materials were the ‘trust circles’—canvases I designed to represent the three stages of how trust is developed in the work of community engagement (Figure 1). The workshop activity required participants, working individually, to think through each stage of the trust process—initiating, building, and retaining—by matching together three forms of prompts: barriers, actions, and technologies (Table 2). I designed the trust



**Figure 1. Completed trust circle. The circle is broken down into the three stages of the trust process: Initiate, Build and Retain. Each participant had their own trust circle with their goal placed in the center on the pink post-it note.**

circles to force participants to decompose the process of trust into the stages represented on the canvas; building on my prior work, I understood that each stage required different responses to the provided prompts. Each participant had their own trust circle, individual sets of the prompts, and blank cards they could use to introduce new prompts as they saw fit.

At the center of each trust circle was a goal the participant identified as part of their current work (Figure 1). The goals pursued during the workshop ranged from specific project outcomes to more general organizational imperatives. P1, P2 and P13 pursued goals that aimed to improve different communities they work within: P1 and P2 each had goals tied to specific health



Barriers	Actions	Technologies
Speed of Progress; Misinformation; Cycles of Leadership; Perception of Equity; Input Doesn't Matter; Language and Education; Availability for Engagement; Past Experiences; Accessibility; Sense of Voicelessness; Unfamiliar with Process; One-off Engagement; Out of the Loop; Fear of Change	Being Present; Setting Expectations; Sharing Decision Making; Sustaining Engagement; Listening; Educating Community; Participating in Goal Setting; Managing Expectations; Meeting people where they are; Raising Awareness	Mobile App; Website; Survey; Virtual Meeting; Drone; Data Visualization; Broadcast Media; Group Messaging; Crowd Sourcing; Hologram; Open Data Portal; Smart City; Blog; Virtual Reality; Social Media; Electronic Polling; Text Messaging; Data Visualization

**Table 2. List of design prompts: 14 Barriers; 10 Actions; 18 Technologies**

interventions; P13 sought to improve communities across the city by facilitating access to the technical planning resources his organization provides. P3, P9, P6 and P7 pursued goals aimed at expanding institutional relationships with different segments of the community: P3 sought to connect the department with new constituents; P6 with millennials to improve the city's recycling initiatives; P9 with minority and underserved communities; P7 with immigrant communities. P4 and P11 pursued goals aimed at increasing community input into decision making processes: P4 through coordinating the city's neighborhood planning units which provide a mechanism for communities to provide input on zoning, land use and city ordinances; P11 by facilitating community led master planning processes for city parks. P5 and P8 pursued goals to improve their department's communication with communities: P5 wanted to make sure customers understood how to interact with the department for billing and service requests; P8 wanted to provide a better public understanding of what her agency is and its purpose. P10 and P12 pursued goals to create community ownership of department initiatives: P10 wanted to better involve communities in customizing how his agency's infrastructure project would impact neighborhoods; P12 pursued this goal generally as it is vital to the sustainability of initiatives across all his agency's work. organizational imperatives. P1, P2 and P13 pursued goals that aimed

to improve different communities they work within: P1 and P2 each had goals tied to specific health interventions; P13 sought to improve communities across the city by facilitating access to the technical planning resources his organization provides. P3, P9, P6 and P7 pursued goals aimed at expanding institutional relationships with different segments of the community: P3 sought to connect the department with new constituents; P6 with millennials to improve the city's recycling initiatives; P9 with minority and underserved communities; P7 with immigrant communities. P4 and P11 pursued goals aimed at increasing community input into decision making processes: P4 through coordinating the city's neighborhood planning units which serve as a mechanism for communities to provide input on zoning, land use and city ordinances; P11 by facilitating community led master planning processes for city parks. P5 and P8 pursued goals to improve their department's communication with communities: P5 wanted to make sure customers understood how to interact with the department for billing and service requests; P8 wanted to provide a better public understanding of what her agency is and its purpose. P10 and P12 pursued goals to create community ownership of department initiatives: P10 wanted to better involve communities in customizing how his agency's infrastructure project would impact neighborhoods; P12 pursued this goal generally as it is vital to the sustainability of initiatives across all his agency's work.

These goals grounded the activity so that participants could link specific challenges they were facing with the different stages of trust, the barriers to moving forward, and the actions they were or could be taking to advance toward their goal. Once the goals were established, participants pinned the different prompts to their trust circles, adding descriptive detail that further explained why they selected the prompt. At the end of each stage I brought the

participants together to share their selection of barriers, actions, and technologies to the group.

The 14 barrier prompts (Table 2) represented different sources of distances that commonly appear in community engagement identified from my previous work (Corbett and Le Dantec 2018b). Barrier prompts included: misinformation (knowledge distance), fear of change (hypothetical distance), language and education (social distance), speed of progress (distance in time), one-off engagement (representing distance) and cycles of leadership (power distance). In this way, I sought to represent the more abstract concept of ‘psychological distance’ to my participants in a colloquial manner to provide better understanding and engagement with the materials. To this end, I did provide general descriptions of the barriers but encouraged participants to interpret them openly in the context of their work.

Similar to the barriers, I developed 10 action prompts (Table 2) that represented the *trust work* practices. Participants would select actions they felt could address the barriers pinned to the trust circle. Like the barriers, each of the actions were briefly described while allowing an open, flexible interpretation. For instance, the action educating community could be carried out in many ways: formal training or workshops, informal conversations, or website information.

Finally, there were 18 technology prompts (Table 2). I selected a wide range of technologies in order to provide flexibility for various municipal work domains represented by my participants. In selecting the technologies, I wanted a mixture between those that were conventional and familiar (website, survey, text messaging), to existing but new (virtual meeting, crowd sourcing), to the more future orientated, distant technologies (holograms, drones, smart cities). Participants selected technology prompts based on how the technology could augment their trust processes by either improving how an action was performed or helping to address a

barrier.

As an example of the whole workshop activity, a participant might choose the barrier misinformation to describe the skepticism citizens might feel toward official communication channels. In response to that barrier, the participant could choose some form of action, for instance educating community as a remedy. Pushing that remedy into technology, they might choose virtual meeting to mediate the action educating community in order to address the barrier misinformation. Throughout the workshops I encouraged participants to approach technology selections that were a mixture between those that were familiar and unfamiliar. In this way, I hoped to elicit selections that were both pragmatic as well as those that were explorative and future orientated.

In short, during the workshop each participant worked individually on reaching their goal by thinking through each stage of the trust process represented by the trust circle (Figure 1) matching the barriers they felt were relevant—to actions that would address those barriers—and finally technologies they have access to (or envision having access to) that would aid their process (Table 2). This allowed me to get a wide view of how public officials across a range of municipal roles address barriers for trust in their goals of community engagement.

## **6.2 Findings**

The data collected from the workshop, comprising the selections of barriers, actions, technologies, goals, field notes, photos and audio, were subject to inductive analysis in order to connect the nascent strategies for addressing trust that developed across the different workshop instances (Miles, Huberman, and Saldana 1984). I decided to organize my analysis around the barrier prompt selections as these were the central material of the workshop activity. I started

by first identifying the most frequent barrier prompts selected in the workshop. These were (in descending order of frequency): speed of progress, past experiences, unfamiliar with process, misinformation, one-off engagement and cycles of leadership. I then looked for strategies in how these barriers were addressed—interrogating the data by asking and comparing: What actions were selected and why? How did the technologies factor in? How were selections differentiated by participant domain as well as goals? The common concepts that emerged form the foundation for how I can move systems design forward when considering the need to account for and develop trust between institutional actors—here city officials and departments—and individuals outside those institutions—i.e. city residents.

I present four sensitizing concepts developed by analyzing the themes in how barriers, actions and technologies (Table 2) were aligned to develop trust during the workshop: *historicizing engagement*, *focusing on experience*, *mediating expectations* and *preserving institutional relationships*. These concepts are meant to provide design advice drawn from how public official view the role of trust and technology in the work of community engagement. Each of the concepts focus on a particular barrier: *historicizing engagement* addresses the barrier of past experiences; *focusing on experience* confronts the barrier of one-off engagement; *mediating expectations* is a way to address the barrier of speed of progress; *preserving institutional relationships* helps bridge the barrier of cycles of leadership. Each of the concepts also falls into a particular stage of the trust process.

### **6.2.1 Historicizing Engagement**

First, *historicizing engagement* is important to the initiating stage as it addresses past experiences that need to be acknowledged and then adjusted to. Next, *focusing on experience* falls

in between the initiating and building stages as it addresses how to provide an experience of engagement that will lead to ongoing interactions that further build trust. Then, *mediating expectations* falls in-between building and retaining stages as it addressed how to maintain momentum to sustain trust over time. Finally, *preserving institutional relationships* is most relevant to the retaining stage as it addresses how relationships established over the course of the trust process can be preserved for future work.

*Historicizing engagement* is a concept for addressing instances of the barrier past experiences which impact the ability to develop trust in the present. While trust as process is future orientated, it is forged upon past experiences which serve as material in the process of forming expectations (Möllering 2001). Thus, a key part of trust as a process is overcoming fear and doubt that may stem from negative past experiences. In this way, past experience is the primary, fundamental barrier for trust. For this reason, I began with this concept as it initiates the trust process and thus sets the stage for the remaining three affordances to unfold during the building and retain stages.

The barrier of past experiences manifested in a variety of contexts and forms in the workshop. P5 in watershed management had to contend with the past experiences of poor responsiveness to issues with service. Responsiveness was also the challenge with P9 in public safety which he described: “many people have past experiences where crimes have been committed against them or family and friends that they feel were not taken seriously.” For P10 in infrastructure development, past experience was the history of broken promises of neighborhood revitalization in minority communities. For P12 in community health, it was the history of negligence that underserved communities felt towards outsiders who alleged to work

benevolently but in the end used engagement to further their own agendas.

There were two key concerns that underlie *historicizing engagement*: engaging the past and altering engagement in a manner that is historically aware and appropriate. First, there is the work of engaging the past which was primarily about developing empathy with it: both P9 and P10 selected the actions ‘meeting people where they are’ and ‘listening’ to achieve this. P9 described this work as the need to build understanding: “*Take time to get a handle at how the community lives. Understand what's normal and what's not.*” P10 felt these actions would build relationships by establishing a presence with (and within) the community: “[making] *yourself present, available and engrained in the community.*” For the technology prompts, both P9 and P10 selected ‘social media’ and ‘surveys’ to help learn, listen, and connect. In this way, the technology selections augment the actions: social media provides a way of meeting people where they are (online) and surveys provide a structured way to listen.

The second key concern of this concept, altering engagement, was described by P12 as the need to be flexible in engagement: “*being prepared to go slower and/or move away from the agenda*” when necessary. In this case, P12 was aware that flexibility engenders trust—allowing agency to express concerns with the speed or direction of a process. This is especially important given the history of experiences in the community he is working in. He selected the technology ‘electronic polling’ as way to feel when and where flexibility might be needed by gauging feelings periodically throughout an engagement process. He thought electronic polling provided a safe, comfortable way for people to express feelings that they otherwise might not be willing to in one-on-one or larger group meetings. For P5, altering engagement was a matter of increasing responsiveness by following up and sustaining communication patterns. She selected

the technology ‘open data portal’ to compliment responsiveness by increasing visibility and openness of her department’s processes. For P10, altering engagement was expressed as a sensitivity towards decisions about technology use in engagement. He selected the action ‘sharing decision making’ which he felt was important to address the barrier ‘perception of equity’. This action and barrier were important for his department’s goal of involving communities—some which are very uneasy due to the history of inequity in development work in the city—in customizing how development would impact neighborhoods. P10 initially selected the technology ‘crowdsourcing’ to augment his action; however, upon reflection he later altered this selection by adding in paper-based surveys because, “*everything I do has to be mirrored in a non-technology way too.*” In this case, P10 is sensitive to the history of this community being left out of conversations in development. As a result, he is careful not to exacerbate this history by introducing technology that may be inappropriate to the level of access, familiarity, and comfort. So, while crowdsourcing might be well suited as medium to achieve shared decision-making care must be taken that it does not present a new barrier while doing so.

The key element of this concept is history—how to attend to the memories, emotions and experiences of the past that can create barriers for trust in the present. Due to the idiosyncrasies of history, the concept of historicizing engagement is complex and requires nuanced response; nonetheless, there are some key takeaways for digital civics that arise in the ways in which past experiences are addressed. First, the technologies used highlight the importance of increasing the flow of communication from resident-to-public official. While altering engagement suggest systems that are flexible and adaptable to the needs of past experiences rather than rigid or primarily concerned with making engagement more efficient. On the point of efficiency, there



is the tension between on one hand how public officials doing the work of engagement are typically overworked and under staffed therefore increasing the efficiency of engagement work is rightly desirable. On the other hand, historicizing engagement may require work to slow down and agendas to be altered thus reducing efficiency.

### **6.2.2 Focusing on Experience**

While the previous concept focuses on conditions of the past that form barriers for initiating trust, *focusing on experience* addresses conditions of the present that must be addressed in order build trust further. The primary barrier this concept addresses is one-off engagement. This barrier arises from inconsistency in community engagement which is problematic for trust—as ongoing, continuous and frequent interactions are its building blocks (Mollering 2006). The most prevalent cause of one-off engagement were issues with the experience of engagement that can prevent citizens from engaging in an ongoing manner. For instance, P11, whose goal was increasing public input by facilitating community-led master planning processes for city parks, believes the experience of engagement is typically too narrow as citizens are given limited agency in the larger picture of how decision-making process play out. He believes this leads citizens to devalue engagement— resulting in one-off engagements that ultimately reduce input because citizens often participate once but never return. In this case, P11 chose the action ‘educating community’ by creating citizen academies which would be trained (and eventually train others) with an expanded view of participation in the planning process. He selected ‘blogs’ as technology that could amplify the reach of these academies by offering citizen presentations on those blogs.

P4 also pursues the goal of increasing input through his department’s work of coordinating

the city's neighborhood planning units (NPUs) that provide a mechanism for communities to provide input on zoning, land use and city ordinances. P4 deals with the inconsistency of citizens experiences in participating in the NPU system as the nature of these units vary significantly based on current leadership and active members. P4 selected the action 'sustaining engagement' which he described as continuing to develop an understanding of the different pain points for citizen experiences in NPUs. He selected the technology 'electronic polling' as way to gather data and inform improvement work in an efficient and convenient manner.

P13 wanted to address the experience of engagement feeling transactional: "*agencies can get a bad rap for only engaging communities when they must put together a periodic plan for funders, etc. Agencies can be seen as disingenuous or inauthentic if they only engage communities in these 3 or 4 year intervals.*" Transactional experiences stem from when engagement occurs only to satisfy institutional needs rather than the needs for ongoing relationships with the communities that they serve. P13 selected the action 'educating community' as way to provide a more regular, direct linking with residents to understand their needs and concerns. He selected the technology prompt 'virtual meeting' as a way to mitigate the resources strain that his action selection would introduce.

The key element of this concept is the experience of engagement; however, as Asad et al. noted "community engagement is to cities what user experience is to computing: it signifies a large and multi-faceted category that simultaneously speaks to general qualities of interaction and to specific ways of doing that interaction" (Asad et al. 2017). Thus, given the inherent variability of experiences—this concept resists prescriptive implications for design of trust in digital civics. Rather, than prescriptions, the value of this concept is simply in how it calls focus

to the quality of experience in engagement which can be overlooked in comparison to other aspects such as empowerment, access, and social justice. While these are important nonetheless (as both outcomes and conditions of engagement), this concept suggests a holistic view of the conditions that affect the quality of the “user experience” overall.

Having addressed issues of the past and present in the previous two concepts, I move to the concept *mediating expectations*, which focuses on issues with future expectations. Conceptually, this concept falls into the building stage of trust. The primary barrier this concept addresses is speed of progress, which refers to the speed in which the results of the work of community engagement come to fruition. Speed of progress can either be too slow, or too fast; both of which are problematic for trust. For P9 in public safety, his goal of expanding relationships with minority and underserved communities is problematized by the speed of progress being too slow in issues like systemic neighborhood crime or ongoing police accountability. For planners like P3 and P10, speed of progress can be too fast when it comes to introducing change to the built environment causing fear of change. In both cases, differential expectations of speed (what one considers a reasonable timeframe) is the issue.

Expectation is what enables trust—trust is the process of how one comes to form positive expectations in the face of uncertainty (Mollering 2006). In this way, expectation and time are the primary elements of trust. These elements are interlocked as the strength of trust (or distrust) at any given point is dependent upon sustaining expectations. In the work of community engagement this means that trust will fluctuate over the course of an engagement process—as the momentum of expectations meets the friction of the passage of time. This was evident for P13 in regional planning where projects run for many years with multiple moving parts and

contingencies that results in oscillating momentum. This was also the case for P10 whose work in infrastructure development operates on a timescale of decades whilst the economic, social and cultural ramifications of the work do not (and may not ever) align with the physical manifestations of the work. This makes expectations difficult to sustain as P10 describes, “[it] *can be a frustration that change isn't coming fast enough...*”

### **6.2.3 Mediating Expectations**

I developed the concept *mediating expectations* based upon the two key concerns in how speed of progress was addressed: shaping expectations and maintaining momentum. The first concern of this concept shaping expectations starts with providing a basic understanding of the factors that impact speed of progress so that expectations can be formulated. An example of this was in how P5 in watershed management selected the action ‘educating community’ which meant making sure residents had at least a basic awareness of the processes of her department: “*it is important the public know that we do have a process for services offered...sometimes they just don't know...they may just reach out to their council member on Twitter rather than call my hotline.*” After expectations are in place, the second concern comes into play—as it then becomes important to engage regularly as a way to maintain momentum. Illustrating this second concern, P13 in regional planning selected the action ‘sustaining engagement’ which is important, “*because it helps citizens track with the progress of projects that cannot be seen at a glance. It also helps them better understand the process of funding and implementation.*” Here, sustaining engagement not only does the work of maintaining momentum but also helps to expand understanding of the process as it develops over time.

The technology prompts selected in this concept fell into two categories: visualizing

processes and facilitating ongoing conversation (P5, P6, P10, P13). Both P3 and P9 selected technologies that would mediate expectations through visual representation. P3 selected onsite ‘holograms’ to show final plans or where a plan is at in order to help with the action ‘setting expectations.’ He selected ‘data visualization’ to help ‘sustain engagement’ which was using data visuals to update and educate in a way that would be easy to understand and remember. Likewise, P9 selected ‘data visualization’ to help momentum by, *“being able to visualize what the progress is... getting the community hope... something to look forward to.”*

P10, P13, P5 and P6 all selected technologies to facilitate ongoing interactions. For P5 and P6, (both in service providing departments) this took the form of custom ‘mobile apps’ for their departments that would mediate expectations through providing a communication channel that is real-time and customizable. P6 described the benefits of this as, *“Mobile app may allow ratepayers the ability to interact with department in real-time see status of issues, more effectively pay bill (this helps with speed of progress).”* P10 selected ‘text messaging’ to facilitate ongoing interactions because it is, *“digital divide friendly...even if you don’t have smart phone to use an app.”* Whereas P13 selected ‘blogs’, *“because it allows anyone to read about the progress of projects at any time. It also allows comments and Q&A features so learning can take place.”*

The key element of this concept is expectation which is mediated by altering perception, experience, and interaction. Expectation is vital for trust—as trust is future orientated—providing the suspension of doubt that enables one to pursue actions toward a desired future (Luhmann 1979). The challenge for trust in community engagement is in how to sustain ongoing work necessary to reach some desired future in the face of uncertainty and setbacks.

The last sensitizing concept, *preserving institutional relationships*, falls into the retaining

stage of the trust process as is it is concerned with the ways in which trust can be retained in relationships over time. The primary barrier this concept addresses is cycles of leadership. Cycles of leadership refers to the cyclical nature of civic relationships: how contact points on both sides of the relationship are constantly shifting making trust difficult to hold in place over time. On the government side, this barrier reverberates through the political cycles of elected officials moving in and out of power, who then appoint new department leaders who in turn hire new employees.

#### **6.2.4 Preserving Institutional Relationships**

I developed the concept preserving institutional relationships based upon the concern of preservation that was central to how cycles of leadership were addressed. Preservation was pursued by extending the focal point of institutional contact beyond top leadership in such a way that preserves relationships through cycles. The action ‘sustaining engagement’ is a key component of this concept as P8 describes, “have[ing] *consistent outlets for the community to engage us regardless of changes in leadership.*” Here, “us” refers to internal staff rather external contacts such as mayor or city council. Both P8 and P13 selected technologies that would facilitate more frequent and regular contact from within their respective entities: P8 thought staff use of ‘text messaging’ would be a good way to have casual conversations while P13 chose ‘blogs’ and ‘social media’ to remain in contact with communities over the duration of planning processes.

P11’s focus was on how to preserve visions throughout cycles of political regimes that unfold during the timeframe of master plans, “*plans like these happen on a scale of time that ends up being in between regimes (not something that happens on an annual basis) — even the best plans*

*etched in stone have the challenge of becoming someone's else vision...how do you work through that?"* P11 selected the action 'managing expectations' which he described as making it clear to citizens that even after a planning process produces a vision—this vision is not self-fulfilling. Rather, ongoing work is needed to keep the vision alive through cycles of leadership. His choice of technology was 'website' but he wondered how to avoid the tendency for websites to become static repositories rather than an ongoing source of engagement capable of sustaining visions, "[websites] *become artifacts of the past rather than a living breathing thing...like the plan itself.*"

The key element for this concept is preservation; but rather than preservation in the sense of documenting the past statically—preservation is future orientated and dynamic. For P8 and P13, preservation was a matter of facilitating ongoing casual conversation and social interactions by increasing contact from internal leadership. Whereas for P11, preservation was aimed at sustaining engagement necessary to carry on the visions embodied in plans. Preserving institutional relationships addresses the barrier cycles of leadership by extending the focal point of institutional contact thus drawing away from over-dependence on singular, transitory relationships by distributing where, how, and with whom does institutional contact occur. This has implications for trust in community engagement where interpersonal and institutional trust have complimentary yet distinct roles. Generally public officials tend to emphasize interpersonal trust. This was reflected during the workshop (and my previous work (Corbett and Le Dantec 2018a)) in an instance where P8 expressed difficulty in thinking about how technology could be used in the retaining stage remarking, "*this is hard because trust is people to people.*" P11 added, "*people don't trust institutions they trust people...*" In the end, design will need to take care in how trust is mediated in community engagement; balancing support of trust in both its institutional

and interpersonal forms.

## **6.2 Discussion**

While digital civics has used as a point of departure the community perspective and experience, through this participatory design research with public officials, I add balance by working from the institutional side. Thus, this work expands the design space by addressing a facet of digital civics that has gone under-studied: exploring how design could approach creation of tools to support the work of community engagement performed by public officials. By inserting itself in this space, digital civics could provide much needed resistance to the dominance of neoliberal design logic. While this space presents an opportunity for digital civics it is not without some significant challenges.

The challenge digital civics faces is that designing for present needs and practices does not align with its goals to transform civic interactions and confront established modes of neoliberal governance. Reconciling the challenge of designing for what is, instead of what might be, prompts me to ask a more fundamental question of digital civics: should digital civics provide tools and support for the work of community engagement as is—responding to user need, such as it were? Or, do we design tools that reflect what we expect of public officials and residents alike in the work of governance?

In the end, we are left with the situation that on one hand, the perspective from public officials tends to leave participation, democracy, and power relations in place; while on the other, buy-in and adoption of new technologies by public officials is key to the success and longevity of digital civics (Buffat 2015; Simon et al. 2017; Sotsky and Kartt 2018). At a more fundamental level, is how trust is operationalized (and to what ends) can differ considerably between digital



civics relationality agenda and the perspectives of public officials I captured here; even while trust remains vital to both. While I see no way resolve this conflict, the four themes from my workshops—history, experience, expectation, and perseverance—provide opportunities for common ground. In what follows, I use each theme to probe both the tensions and opportunities for digital civics design practice to support and enable trust from within the work of community engagement.

### *History*

While design is inherently future orientated—supporting relationships in digital civics will need to actively engage history to be successful. To engage history, I mean the ways in which past experiences can be brought to bear on current systems and processes. In the civic space, this can be difficult as history is often linked to inequity, injustice, broken promises, and ultimately distrust.

Digital civics has provided several examples we can draw from history to productively build relations between different constituencies. For instance, Crivellaro et al (Crivellaro et al. 2016a) explored how history of place was fundamental to the design of technologies to solicit oral history and build relations between past and future residents of public housing. The briefcase they designed was fitted with various audio recording and playback mechanisms and was passed from resident to resident, accumulating stories of place that set the stage for future engagement around the identity of the community. The key to success in Crivellaro’s design intervention was by allowing residents agency in engaging history on their own terms, rather than accepting narratives developed from others.

In another example, Le Dantec and Fox’s community historians project (Fox and Le Dantec

2014), local history was engaged through participatory design encounters to empower an underserved community through the creation of shared identity. In this case, sensing technology was used as a medium to explore how the community might further goals, communicate values, and utilize social capital. In these examples, agency and empowerment—both of which are vital to trust—were enabled through focusing on history in the design and use of digital media. These two examples point to ways in which history can be productive tethered by technology to establish a pathway to, and basis for trust. The challenge for design is moving these kinds of design interventions out of the community settings where they were developed, and into institutional settings where instrumental performance takes precedent over community building and affective experience. The concerns that P10 and P12 expressed during the workshop about technology's role in addressing historical breakdowns means that we need to find new ways of capturing, codifying, and sharing historical experience—not just knowledge and data. One potential avenue is by focusing on agency and empowerment, both within the municipal workplace, and in relation to the municipal official and the community they serve.

### *Experience*

Experience in the public sector is most often framed around customer service. One of the traits of neoliberal governance is by directly adopting the private sector perspective of business and technology to improve experience by running government like a business and treating citizens as customers (Dutil et al. 2008). Of course, improving the experience of government along these lines is important—there are elements of local government that are best modeled as service providers with customer—but the larger point is to not conflate the experience of receiving service from the government with the experience of participating in the decision-making

processes of government. Recognizing the difference between private and public sector needs is especially important given that the methods applied to improving experience in the former can be fundamentally incompatible to the values of experience in the latter (Asad et al. 2017; Gordon and Walter 2016).

In contrast, experience in digital civics is framed as “participative experiences (McCarthy and Wright 2015)” that “emphasizes dialogue, reflexivity and mutual learning” (Olivier and Wright 2015). A key quality of participative experiences is reconfiguring social relations in terms of the roles actors play and how these change through participation. Trust is developed gradually over these experiences by developing empathy and understanding— “making visible what is invisible to the other” (McCarthy and Wright 2015). Overall, McCarthy and Wright suggest trust is both the means and ends of participative experience—with design enabling participation and then responding to the dialogue created within (McCarthy and Wright 2015).

Participatory experience thus construed seems well suited to addressing the challenges with experience that arose during the workshop. However, there is a dissonance between how experience is viewed by public officials and how it is framed within the research agenda of digital civics. In digital civics, experience is both the means and ends in bringing about fundamental changes to services, processes, relationships, and ultimately power. In comparison, the perspective of experience of my participants was much more incremental and pragmatic—the assumption is one of working within the status quo, rather than creating something entirely new. The unwillingness to break from the familiar was clear in how the technology selections of workshop participants were fitted into existing processes and tuned to amplifying reach or collecting data. Unfortunately, focusing on experience in this manner would be insufficient to

address the primary barrier of one-off engagement that worried my participants (and which contributed to troubled histories of interaction).

Ultimately, civic design needs a middle ground. A potential example can be found in Johnson et al's community conversational platform (Johnson et al. 2017). Community conversational gamifies the experience of local consultation processes to encourage and structure conversations. The platform also featured an interface for searching and filtering data to support analysis by officials. In this way, the platform creates a participatory experience that can be used directly to support the work of community engagement. The second example is Sens-Us, which focused on the experience of citizen participation with surveys (Golsteijn et al. 2016) . In order to spur more engagement with surveys (which are typically unappealing and tedious experience) Golsteijn et al explored how materiality and space could create a more enticing and enjoyable interaction. Promising in both of these examples is how creative, playful, and explorative experiences are wedded with the practical needs for gathering data and informing decision making that characterizes the work of community engagement performed by public officials.

In the end, research in digital civics is foregrounded by a commitment to experience, and to that end, provides several exemplar interventions (Crivellaro et al. 2015, 2016a; Golsteijn et al. 2016; Korn and Back 2012). However, the key question I raise here is how can these experiences achieve the other commitment of digital civics, "to support citizens becoming agents of democracy through technology and dialogue with public institutions that actualize public will" (Vlachokyriakos et al. 2016b)?

### *Expectation*

At the most basic level, trust is a process of forming expectations. Thus, enabling trust is

essentially about supporting how expectations are formed and maintained (Möllering 2001). The challenge of supporting expectations arises from uncertainty and time; both of which are especially problematic in the work of community engagement. This was exemplified in the challenges with the barrier of ‘speed of progress’ that participants raised in the workshop—engagement must continue and manage differing expectations about how quickly or how long something should or does take.

Supporting expectations through design is perhaps the most straightforward of the four affordances. The most common form this affordance comes through interfaces like data dashboards and other associated visualizations of public data. Such systems are designed to share information and provide a common understanding and set of expectations of a process or service. While common, supporting expectations with open data and visualizations is not without its problems and limitations. For instance, McMillan et al. discussed the problems public officials face when opening up data—the “messy realities of what it means to collect, curate, control, and disseminate data relating to the lives and practices of citizens” (McMillan et al. 2016). Creating and managing open data is a resource intense process that requires constant work of curating and translating across boundaries of accountability and influence (CA Le Dantec and Edwards 2010). Additionally, there is always the potential threat public officials face that the data they share could be used to subvert city functioning. Moreover, in addition to the problems McMillan identified, O’Hara’s study of open data and transparency initiatives in the UK examines the interaction between open data and trust, pushing back against the simplistic determinism in much of the popular discourse surrounding the ability for open data to enable trust (O’Hara 2012). A key concern for O’Hara was that top down approaches—where public institutions decide

alone what to release and what not to—fail to be meaningful for citizens and thus fail to engender trust.

Using data dashboards and open data to manage expectations is also more bound to questions of accountability than to efforts to build trust in relationships. In fact, accountability is often a product and response to distrust, therefore necessitating the need for increased oversight. In this way, open data as a means to engender trust is paradoxical—as society becomes increasingly more complex and interdependent, the ability to monitor, predict, and calculate is reduced, which explains the allure of efforts around smart cities where instrumentation and machine learning are deployed to manage these growing complexities. However, by applying complex systems to manage complex systems, we only increase uncertainty. Thus, ultimately the proliferation of data can, in fact, increase complexity and therefore risk which problematizes the process of forming positive expectations. In reality, people do not have the cognitive resources to perceive the multitude of vulnerabilities, so instead they trust (or rely) on institutions, others and systems (Warren 1999).

A more appropriate approach to supporting expectations to sustain trust in digital civics can be drawn from Davis’s work exploring participatory design in ambient persuasive technology (Davis 2009). Davis tries to solve the possibility of manipulation inherent in persuasive technology by introducing participatory design which works by:

*“involving potential users in design helps to avoid some potential ethical issues with persuasive technology. Without participatory design, the designer stands outside of the community and intends to change the behavior of community members. With participatory design, the persuasive intent comes in part from community members who want to change the community’s behavior from*

*within.”*

The possibility of manipulation Davis raises is also very relevant in supporting expectations generally and even more so if open-data is the method. In fact, both McMillan and O’Hara allude to the dangers of manipulation with open data—in terms of selecting, withholding data, scrubbing data and outright falsification.

In comparison, participatory design as a method of supporting expectations would work by bringing people into the process of forming expectations—much the same as how Davis sought to create persuasive intent from within users. So rather than expectations being supported ‘from afar’ with open data and data visualizations which I have argued is just a way of increasing visibility of work being done by public officials—participatory design offers an alternative to support expectations ‘from within’ by working with public officials in formation of expectations. Thus, participatory methods of developing and opening up data present a promising approach to the affordance of expectations in digital civics. To this end, existing work around participatory data visualizations (Clarke et al. 2013; D’Ignazio and Klein 2016; DiSalvo et al. 2008; DiSalvo, Maki, and Martin 2007)—provide good examples of how this might be pursued.

### *Preservation*

On the whole, trust as a process is time consuming and arduous. Thus, preservation of relationships—which are the end products of the trust process—will always be important. On this point, digital civics and the needs of public officials are most aligned when it comes to preservation. For digital civics, preservation is implicit for participatory experiences in how these should focus on the durational quality of relationships to establish trust (McCarthy and Wright 2015). This necessitates extended ongoing encounters and a commitment to making lasting

changes to relationships. Many of these elements McCarthy points out were also present in how preservation was approached in the workshop—supporting ongoing encounters, improving durational quality, and the commitment to lasting relationships described by P8, P11 and P13.

That being said, one important aspect of how preservation was pursued in the workshop was the distributive nature in the ways in which preservation was carried out—distributing where, how and with whom does institutional contact occur. This distributive aspect is both promising and problematic for trust. Botsman has recently detailed how the impact of technology on trust in society is tangled by how digital technology’s fundamental impact on trust is distributive: trust becomes proliferated across systems, platforms and infrastructures (Botsman 2017). A good example of distributive trust in digital civics is the CrowdMemo platform by Balestrini et al (Balestrini et al. 2014). The platform was a sociotechnical system for generating and circulating microdocumentaries in order to help preserve local heritage in a rural town. A key factor in the success of CrowdMemo was in how it distributed interactions across several different classes of relationships throughout the community. In this regard, the CrowdMemo project was an exemplar display of preservation in HCI.

On the other hand, distributive trust as means of achieving preservations is not without its problems. While in the past trust was centralized in institutions—through leaders or key officials (as was discussed in the workshop)—Bosman argues that distributive trust weakens institutional trust. This in turn reverberates to how trust operates interpersonally; trust is ultimately the product of interpersonal relationships as well as institutional which are intertwined in such a manner that, “trust cannot be fully understood and studied exclusively on either the psychological level or on the institutional level, because it so thoroughly permeates both” (Lewis



and Weigert 1984). Ultimately, the take-away here is designing for preservation should be careful to consider the interrelated nature of both forms of trust.

### 6.3 Implications for Design: Sensitizing Concepts

I argue the themes from the workshops can be used as sensitizing concepts to help direct designers and researchers in solving design problems related to supporting trust in civic technology. By sensitizing concept, I have in mind something similar to what the eminent social Herbert Blumer discussed in his seminal article "What is Wrong with Social Theory." *American Sociological Review* 18 (1954):

*A sensitizing concept lacks such specification of attributes or bench marks and consequently it does not enable the user to move directly to the instance and its relevant content. Instead, it gives the user a general sense of reference and guidance in approaching empirical instances. Whereas definitive concepts provide prescriptions of what to see, sensitizing concepts merely suggest directions along which to look.*

Blumer reminds us that sensitizing concepts cannot provide “specifications of attributes or bench marks and consequently does not enable the [designer] to move directly to the instance and its relevant content.” Rather, they provide “Directions along which to look” which is what I have in mind for the use of historicizing engagement, focusing on experience, mediating expectations, and preserving institutional relationships.

First, *historicizing engagement*, is important to consider when designing to initiate trust as it requires design to engage with the history which has produced the present-day manifestations of distance. The second concept, focusing on *experience*, is important between the initiating and building stages as it emphasizes the need to focus on how to design experiences that would

further build trust. The third concept, mediating *expectation*, straddles the building and retaining stages as it emphasizes the need for design to maintain and support expectations over the process of reducing distances. Finally, *preserving institutional relationships*, is most relevant to the retaining stage as it highlights the need for design to address how relationships established over the course of the trust process can be preserved. In this way, much like how affordances are popularly known throughout design practice to provide hints to how to use and interact with objects (Norman 2002), these concepts help thinking about and interacting with the stages of trust development in design process.

## CHAPTER 7: Designing with Trust

In Fall 2018, I began working with the Mayor's Office of Immigrant Affairs. This partnership developed over time between myself and the director of the office, Michelle Mazier, beginning from when I first met her during the Living Cities project (she was part of the interviews in chapters four and five) then further so when she participated in the workshop in chapter six. As I learned more about the office and their community engagement work in the city, I approached Michelle and the assistant director about a partnership between the office and Participatory Publics. We found mutual interest in doing so: the office was open to ideas for how technology could improve the efficacy of their community engagement work; while I was interested in the unique challenges for trust in their work. This set off a two-year design-ethnography with the office where I observed the offices' community engagement work and conducted informal interviews with staff as well as a guiding them through a series of design activities. After roughly a year of exploratory field research within the office, my focus eventually set on the issue of housing code violations being faced by Hispanic immigrant communities in several apartment complexes located north of the city.

Atlanta has the fastest-growing population of immigrants from South America than any other major US city (Carnathan 2018). At the same time, like many other cities across the US, Atlanta is suffering a crisis of low-income housing. One of the consequences of this crisis for the immigrant communities the office interacts with is these communities are constantly dealing with code violations but are disempowered to confront them because of their distal position with the city. Trust plays a vital role here: because these communities are often alienated from city government, they are either completely unaware of and reluctant to engage with the city's code

enforcement process. I took this challenge as an opportune case study to apply and evaluate the implications for designing with trust I developed in chapters four, five, and six: the elements *distance*, *sociotechnical components*, and *sensitizing concepts*. Using these elements, I designed a sociotechnical system *Code Enforcer* to aid Immigrant Affairs' ongoing efforts to help these communities to get repairs and maintenance of their living spaces. Code Enforcer will allow the office to monitor and assist residents' interactions with property managers and the city's code enforcement process.

I had two goals in mind in designing this system. My first goal was to evaluate how do (or do not) the elements of distance, sociotechnical components, and sensitizing concepts inform *designing with trust*? My second goal was to evaluate how the system did or did not mediate *trust work*. Code Enforcer was designed to mediate the *trust work* performed by the Office Immigrant Affairs. This second goal was unfortunately derailed as a result of City Hall shutting down per the federal, state, and local quarantine policies in response to the Covid-19 pandemic. Therefore, the second goal will be left for post-doctoral research.

In the remainder of this chapter, I focus on my first goal exclusively: using the design process of Code Enforcer as a probe to answer my final research question R4: *how (or not) do the elements inform designing with trust*? In addition to R4, I also add additional empirical insights to both R1 and R2 as my fieldwork with the office allowed me to directly observe community engagement and *trust work* in a specific context, which compliments the broad interview studies of chapters three and four.

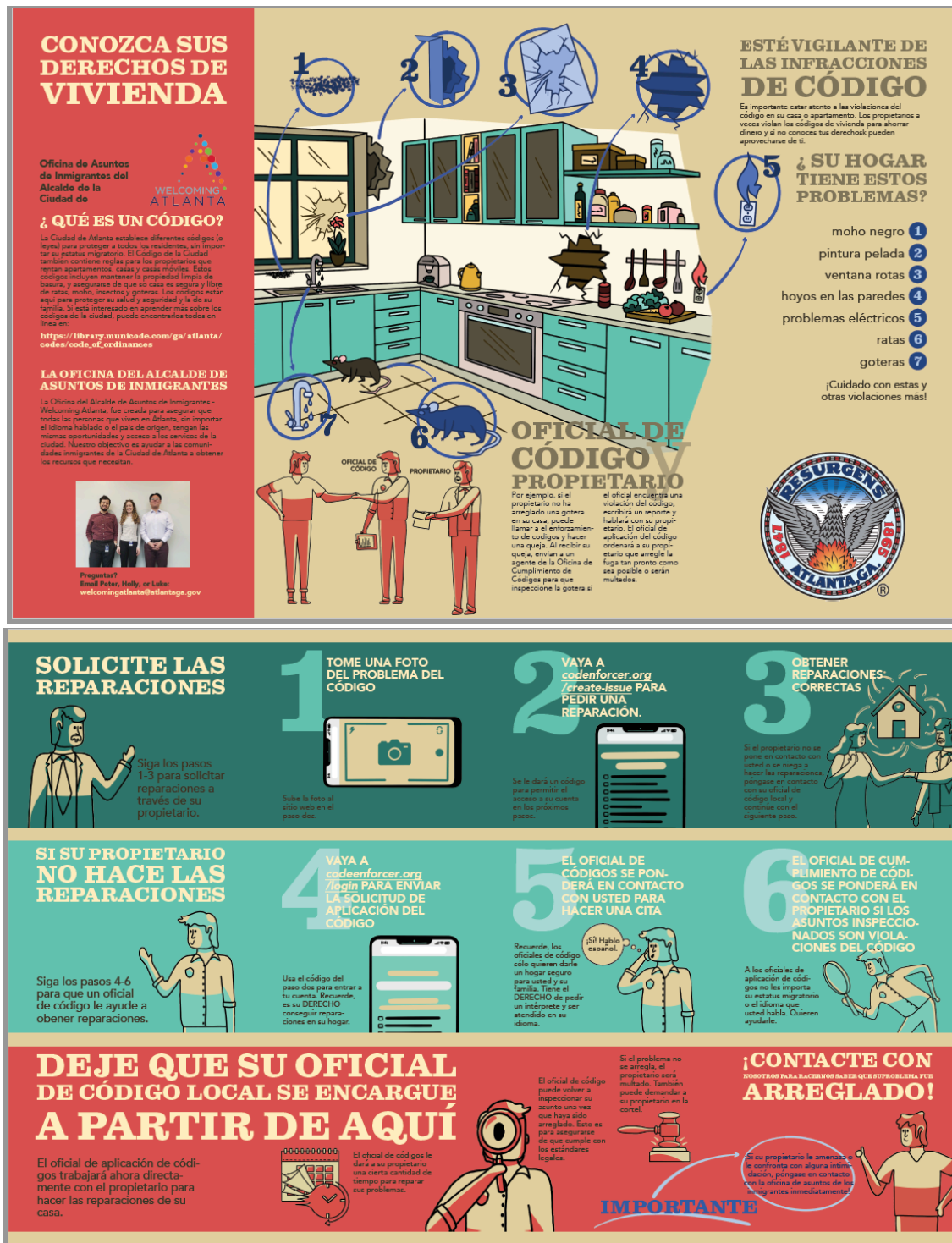


Figure 1. Front and back side of the primary component of the Code Enforcer system the Code Guide: a 11 x 17 paper pamphlet that explains code violations, the code enforcement process, and the digital features of the system. The guide will be used by the office staff in conversations during fieldwork with residents.

## 7.1 Methods

I co-designed the Code Enforcer system with the Office of Immigrant Affairs (Figure 1 above). The design process began with a workshop I conducted with the office that allowed them to think through opportunities for technology to support their work. Later, as the housing code issue came to the fore, I took a more direct role by interpreting their challenges and goals through design concepts and prototypes. These design objects were presented to the office for critique and further iterated leading to the system's final form.

While my co-designers knew I was interested in “trust in design of civic technology” and that I wanted to help them work through challenges of trust regarding their community engagement work, they were not aware of any specifics about the elements nor did I make any attempts to make those concepts explicit. The “trust design elements” were etic constructs known to myself but not to my co-designers: they do not explicitly refer to their work as “*trust work*” or “closing distance.” I did not want to burden my co-designers with my academic pursuits given it was at times already difficult for them to carve out time to engage in design meetings amidst their already low-bandwidth. Thus, I chose to interpret the elements myself internally, then present my interpretation through design concepts. Then, by way of feedback from the office, I could reflect on how the elements were functioning in the design process. Some of this reflection is necessarily posthoc as I developed my understanding of the elements through/while designing. My findings reflect the iterated versions of this knowledge.

## 7.2 Findings

I order the findings around my engagement with the elements in designing the Code Enforcer system. For the sake of clarity, I present my findings with each element in a linear narrative

format, not reflective of the more messy reality of the iterative overlapping way they were used and subsequently developed. I begin with distance, which I found helped to frame the purpose of the system. Next, I found the sociotechnical components were instructive in identifying the system's goals and key components. Finally, I found the sensitizing concepts were helpful as generative heuristics that informed specific features and affordances of the system. In all, my findings suggest the elements did inform designing with trust. However, the way in which trust was interpreted through the elements did create tensions between the designer (myself) and the co-designers (the office).

### 7.2.1 Distance

The first element, distance, originated from the work in chapter five where I argued different dimensions of distance—distance in power, time, space, knowledge, hypotheticality, and sociality—breeds uncertainty in civic relationships which makes trust harder ‘to reach.’ Trust is idiosyncratic, so the ways in which distance will manifest will vary across different relationships and context (Mollering 2006). Therefore, much like Le Dantec et al once argued for approaching the values in Value Sensitive Design practice, distances should be discovered in situ “as local phenomena, expressed in a local vocabulary” (Christopher a. Le Dantec, Poole, and Wyche 2009). Thus, the first step of designing with trust is to locate distance in the design space: *what distances exist and what are the sources?*

To answer this question, I conducted empirical research with the office: attending meetings, observing them in fieldwork, holding informal interviews and participatory design activities. By doing so, I developed an understanding of what trust means to the office, the distances in their civic relationships that make that trust harder to reach, and the *trust work* they perform to produce

and reproduce the conditions necessary for closing distance. From this work, I constructed two views of distance—*local and hyper-local*—that frame the purpose of Code Enforcer: a tool to mediate the *trust work* performed by the office to close the local ***social distance between city government and immigrant communities*** that is affording the hyper-local ***distance in power and knowledge*** that make immigrants community especially vulnerable to housing code violation abuse. In what follows, I briefly describe these two views of distance.

#### 7.2.1.1 Local Distance

By local distance, I refer to distance in civic relationships between communities and government at the scale of the city. Michelle’s remarks during my interview with her back during the Living Cities research in chapter four and five reflect how the office was intentionally designed to be an interface between the city and immigrant communities to close local distance: “*Our office opened up about ten months ago. One of the things we were really committed to in opening the office was to ensure that we are a direct line of communication from our constituents to the mayor. We really see ourselves as serving just a vessel of information that carries what's happening in the field directly to the ears of the people that better decision-makers here in the city.*” To serve as this vessel, the office works in a proactive style by initiating interactions with communities—learning where and what issues are creating distance between the city and immigrants—and then working within government to enact change.

One attempt by the office to close city-scale distance is their I-Speak-ATL initiative. This initiative works across the different entities in city hall, providing training and guidance on how to interact with immigrant communities: “*You shouldn’t have to speak English to interact with city hall*” Michelle remarked, citing the 14th amendment. Calling a city department and being turned



away for because of ones' language or even being offended by innocuous cultural insensitivity from a public official manifests *social distance* from city government. This social distance from government entities, legal processes, and services of the city creates *distance in power* as immigrant communities are less likely and able to leverage civic mechanisms to address matters of concern. In turn, distance in power reciprocates social distance as "*power is a distancing force in social relations*" (Magee & Smith 2013), thus forming a vicious cycle of distancing from civic life.

For Immigrant Affairs, closing local distance enables civic relationships where immigrant residents are "close enough" to "touch" their city. Michelle recalled her observation of such relationships coming into existence when a large number of immigrant residents (many undocumented) attended the opening of a new city park adjacent to their apartment complex: "*these people didn't even know who we were not too long ago so for them to show up on this rainy Wednesday morning, Facebook living the mayor....being super into this [civic event] is really amazing.*" Michelle credited the community presence at this event largely as a product of the offices' *trust work*.

In the grand scheme of civic power and relationships between the city and immigrant communities, attending a park opening is both a low-risk and low-reward interaction which in many ways deemphasizes trust. However, the office views these kinds of events as relational building blocks that scaffold more substantial civic interactions: coming to city planning meetings, requesting city services, reaching out to their city council office, or working with city police. Therefore, while largely symbolic, the park opening reflects what the general outcomes of *trust work* looks like from the perspective of the office: immigrant residents "feeling close

enough” to interact with their city.

#### 7.2.1.2 *Hyper-Local Distance*

Distance at city scale affords hyper-local distance at the scale of individual communities. One such community is Moore’s Mill Village—an apartment complex heavily populated with Mexican immigrants 15-minutes north of Georgia Tech. During fieldwork, residents of the apartment started a conversation with Immigrant Affairs about the horrid conditions they were facing in the apartments: mold, insect and rodent infestation, and lack of cooling and heating, to name a few of the attributes of the apartment. The property management was refusing to address the decrepit conditions and seemed to be leveraging the resident’s fearfulness of reaching out to the city or other legal remedies because of their immigration status.

Part of the property managers’ ability to get away with this negligence is the distance in power which prevents the residents from resisting. The property managers know the social and power distances emanating from the city-scale make it unlikely residents will reach out to the city or other legal remedies. This was evident from several conversations between immigrant affairs staff and community members. During fieldwork, I was able to hear one of these conversations. It would be difficult to recount all of it, but one bit did stand out that I parsed from the Spanish, “*americano si..., hispana no.*” When I asked the staff member about this remark, he said the resident was referring to how the leasing office specifically discriminates against Hispanic residents regarding repair requests.

The ongoing issues in Moore’s Mill are reflective of the wider challenge of housing injustice faced by immigrant communities in Atlanta. While gentrification is being experienced by people all over the Atlanta thanks to the housing crisis, it is uniquely impacting immigrant

communities. The key to regional affordability is preserving more affordable rents at older units (like Moore's Mill), even as new units enter the market and monthly rents escalate. Yet these older units are not being preserved which is particularly problematic for immigrant communities considering how, according to the research of Scott Markley, a Ph.D. student studying urban geography at UGA (Markley 2018), Hispanic populations predominantly occupy apartments targeted for demolition in Atlanta's northern suburbs (where Moore's Mills is located).

While city officials and developers are careful to avoid (and deny when confronted) any racial motivations, Markley argues, “*the motivations for demolishing apartments do not need to be exposed as conscious acts of racism to be troubling.*” Rather, Markley argues these acts should be viewed as “*as the latest chapter in an ongoing saga wherein white suburban leaders limit non-white access to space by implementing policies that enhance white residential exclusivity. Whereas the focus has historically been on pre-emptively excluding potential black residents from certain suburban spaces, it is now to reactively expel Hispanic residents who already live there.*”

Moore's Mill is part of a pocket of densely populated immigrant apartment complexes in that area north of the city that the office is trying to assist and protect. These communities are currently facing down wide-spread gentrification that would displace hundreds of families. This is a spatial crisis—the rising prices will displace immigrant communities. The growing spatial distance of immigrants from the city limits presents an existential crisis for the office: what is the need for such an office immigrant affairs when there are no immigrants?

#### 7.2.1.3 Framing

The element of distance served as an analytical lens that framed the purpose Code Enforcer: a tool to mediate the *trust work* performed by the office to close the local ***social distance between***

*city government and immigrant communities* that is affording the hyper-local *distance in power and knowledge* that make immigrants community especially vulnerable to housing code violation abuse. This analytical use of distance is significant for designing with trust because of how it influences framing.

Framing is a significant phase of design processes wherein designers create the “*first level of order from the chaos of all the constraints*.” As I argued in chapter two, designing with trust is often framed by neoliberal logic’s interpretation of trust as a product of “cutting costs” and “speeding up transactions.” I argued at best this framing achieves reliance rather than trust, and at its worst, creates even more distrust by exacerbating conditions of inequity and injustice in civic relationships. In contrast, by framing designing with trust around distance, trust is interpreted as a product of enabling civic relationships by closing distance.

### **7.2.2 Sociotechnical Components**

The second element—the *sociotechnical components of artifact, practice, and social arrangement*—originated from the work in chapter four, where I argued trust is an emergent property of these components. For instance, artifacts can be created according to shifts in practices and social arrangements (i.e. body cameras made in response to distrust of law enforcement practices within minority communities). At the same time, new artifacts can lead to shifts in practices and social arrangements (i.e. civic technologies create new practices of civic participation through crowd-sourced mobile data [9]). By examining the assemblage of artifact, practice, and social arrangement, we can begin to trace how trust moves and shifts across the distances within and across the present components. This element suggests that *designing with trust* should adopt a sociotechnical perspective by examining the current configuration of these

components: *how are distances closed or opened across the existing practices, artifacts, and social arrangements in the design space?*

To answer this question, I drew from my ethnographic fieldwork again but refocusing on the interplay within the components. By doing so, I developed an understanding of the key aspects of the current configuration relevant to the design of Code Enforcer: the vital role of the *practice* ‘meeting people where they are’ in the offices’ efforts to address the housing code issues, the problematic *social arraignments* between the communities and the city that exaggerate those issues, and the challenges for digital *artifacts* to mediate the offices’ work in regards to these issues. This sociotechnical perspective helped to identify the system’s goals: *mediating meeting people where they are* and *navigating organizational accountability* and the components necessary to enact those goals: the code guide and the issue request page. In what follows, I describe the initial analysis that lead to the development of the goals and components.

#### 7.2.2.1 *Examining the Current Assemblage*

I begin by highlighting the interplay between two types of *social arrangements*: the interpersonal relationships between the staff and community members and the institutional relationship between Immigrant Affairs as part of city government and communities. Trust is a product of both, but for Immigrant Affairs the interpersonal is emphasized more than the institutional. The office understands that trust in their institutional relationship is weak as many immigrants (especially the undocumented) are often reluctant to interact with government entities. Michelle outlines this challenge broadly: “*We work in communities where the police force, which is a part of city government, might not have a great relationship with the community. We work in those areas where they do, or we go in a lot of places where it's perception of what the*

*government does and what the government's interests are versus the realities of that, whether that mistrust is real or perceived is very much a thing.*” Problematic relationships with law enforcement, as well as generalized mistrust of government often result in distal institutional relationships with immigrant communities in the city.

The housing code issues magnify the challenges with distal institutional relationships. Indeed, the City’s Code Enforcement entity sits within the police department. The “code enforcers” are even referred to as “officers,” and their webpage sits directly on the Atlanta Police Department. While a US citizen might be able to discern the differences between these entities, Camile, a legal scholar working with Immigrant Affairs from Colombia describes that for many of the communities the office works with, *“Government is Government for immigrants: mayor, governor, president...they are all the same. They are all in the same structure.”* Therefore, while there is little direct functional relation between Code Enforcement, Atlanta Police, the Trump Administration, or a federal government agency such as ICE, the separations between state, local, and federal is often lost on immigrants who come from governments with fewer distinctions across these three levels. Ultimately, the office views helping people understand and navigate these distinctions as an integral part of their mission. To accomplish this mission, they emphasize interpersonal relationships developed in face-to-face, affective interactions through the *trust work* practice ‘meeting people where they are.’

‘Meeting people where they are’ is a type of fieldwork where immigrant affairs staff goes out into communities—either directly to their homes—knocking door to door, setting up tables during community events or spaces, or holding their own events in the space of communities. In these spaces, the staff engages in semi-structured conversations. While people are often at

first very reluctant to engage — they often end up going into long, unstructured streams about the various issues they are facing. The staff tries to parse these streams to gauge where and when there might be an opportunity for the office to aid in some way—but often the issues being faced are beyond the office's scope. That being said, the success of the interaction (from the perspective of the office) is not judged by if a service is delivered or how efficient it was; rather, it is judged on the emotional connection established: *does this person feel closer now such that they can and are comfortable to engage with their city?*

The key aspect of 'meeting people where they are' is the emotional energy expended by the staff (many who themselves are immigrants) as they attempt to empathize with communities—reassuring them of the office's goodwill and genuine desire to improve the civic system for immigrant communities. For this reason, 'meeting people where they are' is the most relevant practice within the offices' community engagement work generally and is especially vital in their ongoing efforts to address the housing code issues.

To illustrate, while observing the offices' efforts at Moore's Mill, I was surprised at how the staff would be invited into apartments to view, take pictures, and document the issues residents (many who are undocumented) were facing. In one instance, two of the immigrant affairs interns spent several minutes in one apartment and when they re-emerged, they showed us pictures of open holes in the bathroom floor where rodents use to crawl in and out off. For the interns, this was their first time being in the field, and they were being emotionally impacted by what they saw and had spent a great deal of emotional energy. Nevertheless, it is the expenditure of this energy—the emotional connection—that enables the encounters close distance.

This civic encounter at Moore's Mills can be interpreted as an enactment of trust: residents

overcoming the uncertainty presented in their interactions with government officials (immigrant affairs staff) entering their homes and recording information to report it. Later, trust is enacted further as Immigrant Affairs was able to get residents to attend court hearings against the apartment owners. Far more consequential than attending a park opening, this civic encounter involving undocumented residents showing up to a court hearing (with the police and city officials present) to speak out against the conditions of the apartment reflects the function of trust: to enable cooperative action in situations of uncertainty in pursuit of a desired future (Mollering 2001). This is what makes trust valuable to society; it “*discloses possibilities for actions* (i.e., going to housing court) *which would have remained improbable and unattractive without trust.*” The more significant point to be made here is that these enactments of trust are enabled by the closure of distance through ‘meeting people where they are’ which allows the office to develop interpersonal relationships with communities. While essential to developing relationships, the qualitative nature of this work sets up a tension with digital technologies.

While essential to developing interpersonal relationships, the qualitative nature of ‘meeting people where they are’ sets up a tension with digital *artifacts*. This tension is best illustrated when we discussed the possibility of designing a public facing “Office of Immigrant Affairs” mobile app that communities could download. However, such an app was deemed inappropriate for many reasons, further illustrating the tensions with technology for Immigrant Affairs’ community engagement work. While a large amount of the immigrant communities they interact with do have smartphones—they do not utilize the full range of features (emails, apps, etc.,). Moreover, Immigrant Affairs found even the concept of a “civic app” was hard to explain to some immigrants but not from a technical sense; instead from a cultural sense as it would



seem the desire and use of such apps presuppose a level of comfort and interest in interacting with the government via's one mobile device. While these modes of data-based participation and application of civics is becoming the norm for American citizens (white tech-savvy males in particular), this style of interaction is so to speak "foreign" to immigrants.

The above questions about culture and comfort have prevented any significant, specialized use of technology by the office. They do utilize various social media platforms such as Instagram, Facebook, Twitter, and Snap for marketing events, running 'Know Your Rights' campaigns, or posting content to encourage citizenship. Immigrant Affairs finds Instagram to be the most engaging of three, even while Facebook seems to be more widely used in the communities. Twitter appears to be the least engaging as one staff member remarked "*the people we interact with on twitter are already engaged, they are not the real community.*" Again, the questions of who these social media-based modes of civic participation cater to and who is left out become explicit for immigrant affairs, especially as it pertains to the issue of housing code violations. Indeed, the city maintains various digital access points residents could use to file these code violations (through the 311 website and mobile app ). However, for many communities, this technology feels distant. Indeed, the office finds that community members often described that "not being for us" even while they are legally able to use it.

These feelings of distance are in many ways to be expected, given the current socio-political climate created by the federal government under the Trump administration and the conservative governor of Georgia whom both have gone out of their way in policy and rhetoric to distance Hispanic immigrants from the government. Given this larger social reality of civic relationships, without the relational scaffolding of 'meeting people where they are' which closes those feelings

of distance, the digital artifacts feel too far to access for these communities.

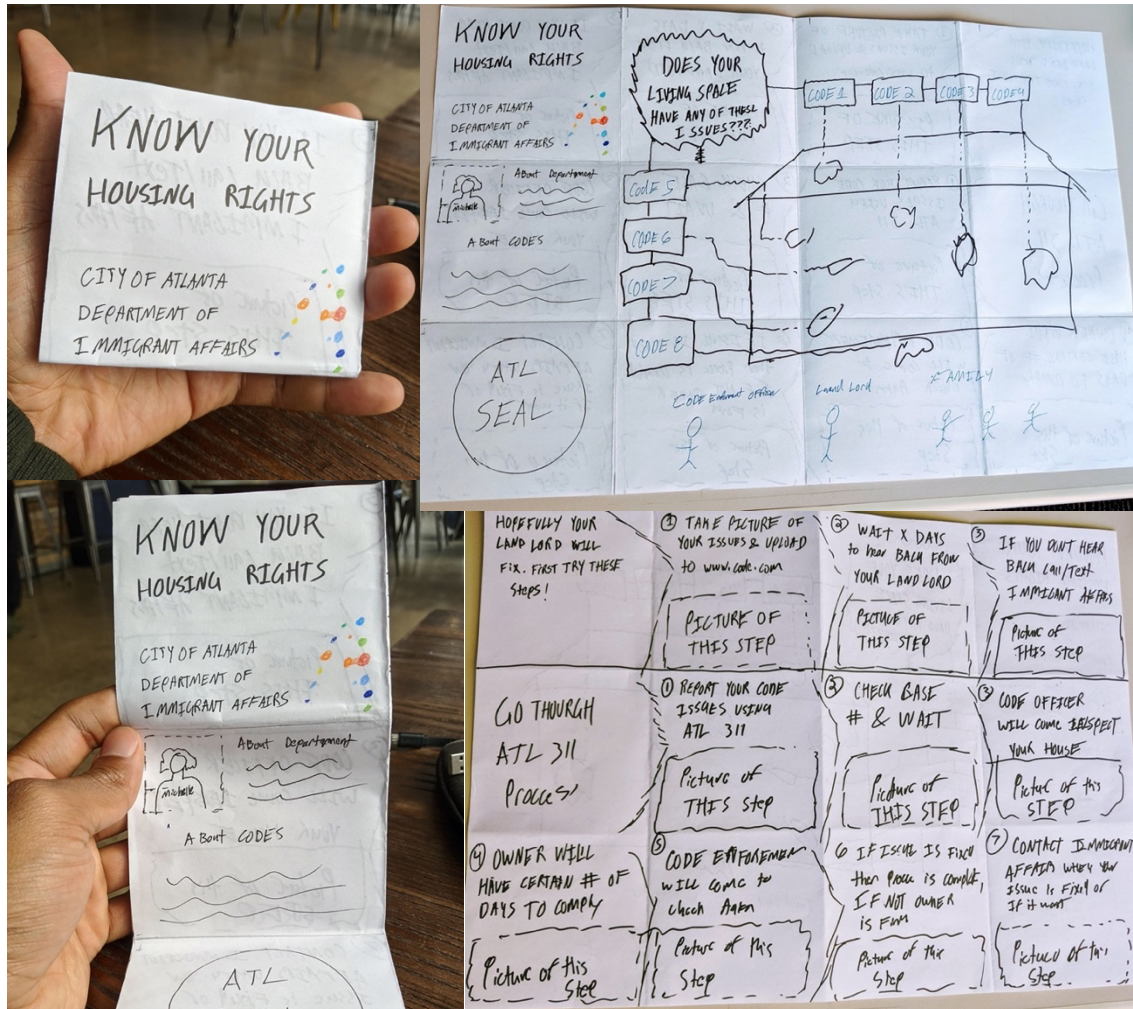
#### 7.2.2.2 *Reconfiguring the Assemblage*

With the view of the *current assemblage* in place, I turn to how the design process of Code Enforcer unfolded in response: what it sought to leave in place as well is what it sought to *reconfigure*. I discuss how this sociotechnical perspective helped to identify the goals and key components of system: *mediating meeting people where they are* with the code guide and *navigating organizational accountability* with the issue request page.

##### *Mediating Meeting People Where They Are*

The first goal the system is designed to support is mediating the practice ‘meeting people where are.’ This practice is essential for the offices’ *trust work* generally and is especially so for the housing code issues. To support this goal in design, I sought to aid the conversations around codes and the code enforcement process that unfold within these encounters. I thought a paper-based conversational aid would be a good starting point to cement the importance of face-face interactions in those encounters (figure 2). I noticed from my fieldwork the office currently does not possess any materials to explain the code enforcement process and often residents simply had no idea what a “code” was nor what “code enforcement” was. Furthermore, even after the office would explain codes and the enforcement process to residents because of the generalized distrust of the city, residents are often reluctant to engage.

To address this challenge, I drew inspiration from an organization called the “Center for Urban Pedagogy” (CUP) that produces print materials used by community organizations to inform people of their rights as well as help people navigate different civic processes. CUP’s guides are infographics that provide instructions in a conversational tone. I thought this format



**Figure 2.** Early paper prototype of the Code Guide: an 11 x 17 paper pamphlet that explains code violations, the code enforcement process, and the digital features of the system. The office staff will use the guide in conversations during fieldwork with residents.

would help educate residents about their rights and provide them with tools and strategies for enacting said rights. Given the tensions and issues with the digital centering the design on a paper medium rather than digital made more sense as paper would both amenable and accessible to the communities.

This is how the Code Enforcer system's first and primary component was identified: the code guide. With this component, the design process responds to the current assemblage by

respecting how the office works interpersonally as the vehicle to the institutional. With the code guide as the primary component I sought to mediate the relational work of meeting people are with a paper medium that would necessitate starting from the interpersonal as the entry point to the institutional (immigrant affairs, code enforcement, and the city government).

### *Navigating Organizational Accountabilities*

The second goal of the system is helping residents with navigating organizational accountabilities. There are multiple accountabilities at play in the space. First, immigrant affairs as mediators that hold the city code enforcement process accountable to the residents. Next, code enforcement as the legal apparatus of the city that holds property managers accountable to law. And last, the various property management groups who are private market entities but are accountable to both the individual leases with residents and the boundaries of state and local housing codes. From the standpoint of trust, residents need to be able to form expectations of how they should (or should not) navigate the different scales of accountability and influence among these organizations (CA Le Dantec and Edwards 2010). To support this goal in design, Code Enforcer would need to provide an entry point to the series of interactions with these different actors.

The most challenging interaction to address is the current process for residents' to request repairs from property managers. As is now, many of the properties where immigrant residents reside do not have information systems for making requests. Therefore, property managers are able to skirt accountability as residents requests for repairs are not verifiable by the city. Moreover, code enforcement strongly prefers not to be invoked before repairs are requested from residents to property managers. Thus, the lynchpin of the process of enacting

\_\_\_\_\_

(nombre de los apartamentos)

\_\_\_\_\_ (fecha)

RE: Petición de mantenimiento

Querido \_\_\_\_\_

(nombre de mánager o compañía)

Le escribo sobre una reparación necesaria en la propiedad ubicada en la siguiente dirección:

\_\_\_\_\_ (dirección)

\_\_\_\_\_ (número de la puerta)

Solicito que se realice la siguiente reparación a la propiedad de alquiler dentro de los próximos \_\_\_\_\_ días hábiles:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

De acuerdo con el Código de Georgia (O.C.G.A. 44-7-13), los propietarios deben realizar las reparaciones necesarias. El Código de Georgia (OCGA § 44-7-2) también prohíbe a los propietarios evitar: su deber de reparación OCGA § 44-7-2 (b) (1); y su responsabilidad por no reparar, OCGA § 44-7-2 (b) (2). También prohíbe a los propietarios evitar sus obligaciones creadas por los códigos de vivienda, OCGA § 44-7-2 (b) (3).

En los próximos 3 días, notifíqueme por escrito el plan de la administración para reparar estos problemas de mantenimiento. Si no recibimos una respuesta por escrito dentro de los próximos 3 días, según el Manual para inquilinos del propietario de la vivienda en Georgia, le notificaremos nuestra intención de realizar la reparación nosotros mismos y deduciremos la cantidad correspondiente de la renta. También, si no recibimos una respuesta por escrito dentro de los próximos 3 días, según el Manual para inquilinos del propietario de la vivienda en Georgia, le notificaremos nuestra intención de realizar la reparación por llamar al "Code Enforcement" de la ciudad o del condado.

Puede ponerse en contacto conmigo en \_\_\_\_\_ (número de teléfono) si desea hablar más sobre el tema. Gracias de antemano por su oportuna atención a este asunto.

Atentamente,

**Figure 3. Repair Request Letter.** Letter is generated with resident information from issue request page

accountability is creating a record of the request. This is how the first digital component of Code Enforcer was identified: a mobile webpage for requesting repairs.

Code Enforcers' issue request page acts as a portable information system for requesting repairs. The issue request page is a simple web-form that takes the necessary information from the resident, allows them to pick a code issue, and upload a picture and description. Next, the system takes this information and formats it into a letter with the necessary legalese (Figure 3 above). The letter serves to remind the property management that the issue requested is enforceable by the city and (if necessary) the resident will hold the property management accountable to that process if repairs are not made in a timely manner. The letter is then sent to the property management via the system's email server thereby creating a dated record of the

request being made.

Thus, Code Enforcer comes to act as a portable information system for documenting and sending repair requests. The issue request page component of Code Enforcer binds the different organizational accountabilities at play in such a way that is accessible and navigable for residents. As a result, immigrant affairs can more easily enact their role as mediators armed with the evidence provided by the information system. Likewise, code enforcement is more apt to act on requests that have been processed by property managers. Lastly, property managers faced with the threat inspection and enforcement become more willing to make repairs.

#### 7.2.2.3 *Identifying Goals and Key Components*

While distance framed the purpose of Code Enforcer at a high-level, the sociotechnical components helped to identify the goals—*mediating meeting people where they are* and *navigating organizational accountability*—and key components the system would need to achieve those goals—the code guide and the issue request page. This sociotechnical perspective is significant for designing with trust as it helps to hedge against the tendency of technological determinism that frequents designing with trust.

Through taking a sociotechnical perspective, we were able to understand that distal institutional relationships between the city and immigrant communities would make centering the design of Code Enforcer as a digital artifact (i.e. a mobile app or a standalone website) an inappropriate approach from the standpoint of trust. In contrast, by pursuing the goal of ‘mediating meeting people are where they are’ with the code guide we sought to leave in place how interpersonal relationships are used as the vehicle to institutional interactions. Such a move stands in stark contrast with the typical pursuits of efficient in the civic design that often

removes or deemphasizes these points of human interaction. Next, the issue request page provides an entry point that binds the different organizational accountabilities at play in such a way that is accessible and navigable for residents. Taken together, what this approach reveals in terms of designing with trust is the importance of first understanding the current components of the space and then seeking to reconfigure these components towards closing distance.

### 7.2.3 Sensitizing Concepts

The final element are the four sensitizing concepts—*historicizing engagement, focusing on experience, mediating expectations, and preserving institutional relationships*. In chapter six, I argued that each of these concepts provides the designer “*directions along which to look*” regarding the attributes a system would need to possess to develop trust as a *process*. Here, my goal was to stress the importance of design to think about trust not as momentary and static but as a continuous and dynamic process. For simplicity’s sake, I approximated this process view with three distinct stages: initiating, building, and retaining, which each require particular forms of work to close distances. The four concepts sensitize design practice towards addressing the particularities of trust in each of those stages. Thus, this element suggests that designing with trust can be guided *by using the sensitizing concepts as generative heuristics to support trust as a process*.

To explore this suggestion, I paired the initial insights developed from the previous two elements with the sensitizing concepts. This pairing enabled an ideation process where specific features and affordances of the system were generated to support the process of closing distance. First, historicizing engagement influenced the information design of the code guide to support initiating trust. Next, focusing on experience influenced the design of the user interactions to

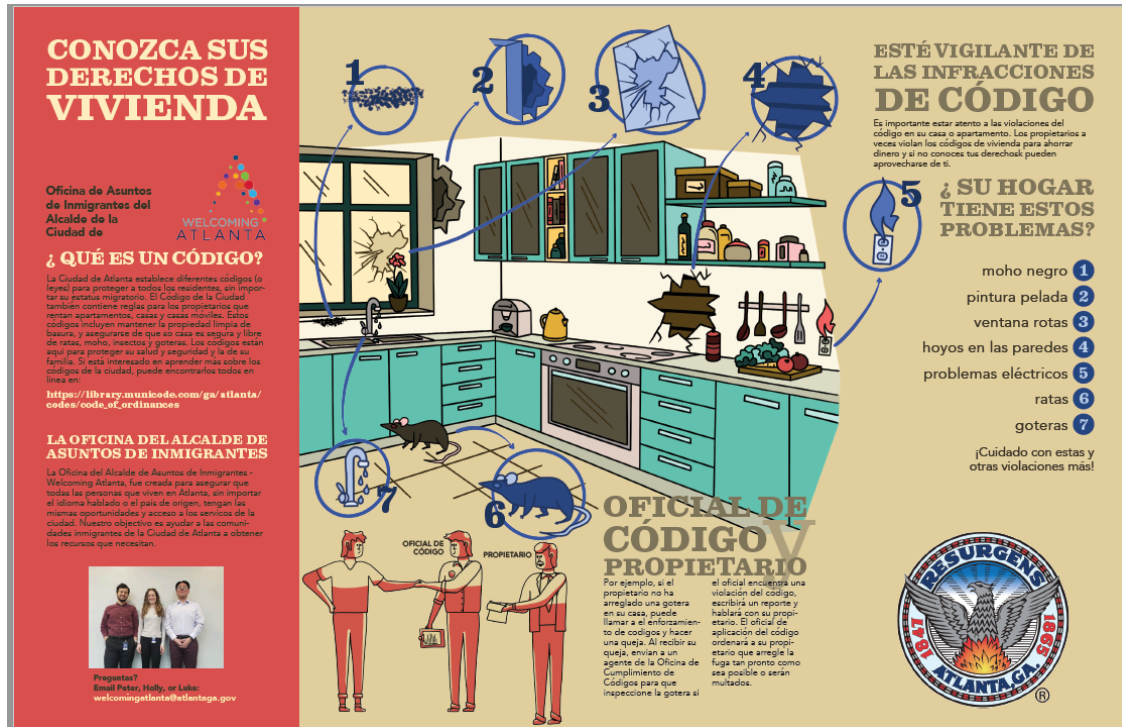
supporting building trust. Likewise, mediating expectations influenced the design of the layout for the code guide and communication features of the system to further support building trust. Finally, preserving relationships influenced the design of the issue map component of the system to help support retaining trust. In what follows, I detail this generative design process with each sensitizing concept.

#### 7.2.3.1 *Historicizing Engagement*

The first sensitizing concept *historicizing engagement* reminds us that trust is initiated from past experiences that have to be accounted for and reflected in design. While trust is often framed around the future—as it discloses possibilities for actions towards some desired future—this concept reframes trust around the past. To illustrate, enacting trust in the present challenges of housing code issues is bound to the past experiences that have created distal institutional relationships between the city and immigrant communities. Specifically, the negative past experiences with the city police department (which code enforcement is part of) as well as the general lack of experience with the code enforcement process. Thus, this concept suggested the design of Code Enforcer should reflect awareness and respect for this history. By doing so, the system would be better able to support the initiating stage of trust process. The information design of the code the guide is where the influence of the first sensitizing concept is most salient (Figure 4). The guide is designed to provide an introduction to the code enforcement process and alleviate any misunderstandings of the role and intent of the Code Enforcement officers.

The design tries to respect the past experiences that make people fearful of and reluctant to engage these institutional processes. For instance, the recent history of the Trump administration and the conservative Governor of Georgia's attempts to instill fear and





**Figure 4. Front side of the Code Guide.** The code guide is designed to support and enable conversations during department's fieldwork. The guide visually explains code violations and informs residents of their rights to enact the code enforcement process.

intentionally distance Hispanic communities from engaging with our institutions. There is also the much older, cultural history of fatalism, “the belief that it does not do any good to plan for the future because you do not have any control over your fate” [(Hispanics: A people in motion 2005)] in Hispanic communities. Fatalism is perhaps the antithesis of trust because it fosters uncertainty avoidance, “the extent to which the members of a culture feel threatened or uncomfortable dealing with uncertain or unknown factors” (Ross, Mirowsky, and Cockerham 1983).

From the office's experience, fostering a sense of empowerment is the key to overcoming both fear and reluctance. During my observations, I could see their attempts to foster empowerment. For instance, in another apartment near Moore's Mills, where the residents were unduly evicted, the office took on a type of community organizing role to empower the residents

to fight back against the management. Because of the history fatalism, the office knew when they went out to gauge how they could support the community to fight back against the evictions they couldn't just ask or suggest actions—they also had to nudge and prod—to counter fatalistic attitudes (“what will be will be...” “it's not right but there isn't anything we can do...”). In another example, during an event at City Hall, Michelle's keynote speech engaged the fear impacting immigrant communities in the city:

*“During these particularly dark times in American history it is imperative that we continue to celebrate as celebration in of itself is a form of resistance...”*

*“Despite what is coming out of the Whitehouse we want everyone to know Atlanta city hall welcomes you, is here to serve you, and you belong here in the City of Atlanta....”*

The design draws inspiration from the offices' existing techniques for fostering empowerment. For instance, the lower right panel with the city's seal was intentionally placed below the list of code violations to lend institutional credibility to the document: that “their government” is taking responsibility for the above issues. Peter noted he sometimes finds that *“when people find out that you are government, people understand you have power to help them in a way that is different than like a community group or non-profit.”* Another instance is in the top right corner, the title of the guide, is written as a call to action:

**CONOZCA SUS DERECHOS DE VIVIENDA**

**KNOW YOUR HOUSING RIGHTS**

Here, we attempt to reinforce that addressing these code issues are RIGHTS and are not limited by race or immigrant status. The information below the title (¿QUÉ ES UN CÓDIGO?)

reinforces this vital point:

**ABOUT CODES:**

*The City of Atlanta passes different codes (or laws) to **protect all residents regardless of immigration status**. The City Code also includes rules for landlords who rent out apartments, houses, and mobile homes. These codes include keeping property clean of garbage, and making sure your home is safe and clear of rats, mold, bugs, and leaks. **Codes are here to protect you and your family's health and safety. If you are interested in learning more about city codes, you can find them all online at:***

***[https://library.municode.com/ga/atlanta/codes/code\\_of\\_ordinances](https://library.municode.com/ga/atlanta/codes/code_of_ordinances)***

First, reading from top right corner down ( ESTÉ VIGILANTE DE LAS INFRACCIONES DE CÓDIGO) the guide exclaims:

**BE VIGILANT ABOUT CODE VIOLATIONS:**

*It is important to look out for code violations in your home or apartment.*

*Landlords often violate housing codes to save money and if you do not know your rights, they can take advantage of you.*

The guide's center presents a large visual display of seven common code violations enumerated on the 1-7 on the left panel. This visual is our attempt to respect challenges with literacy and language with some of the communities Immigrant Affairs interacts with. Below the kitchen visual, there are three characters: a resident, a code enforcement officer (OFICIAL DE CÓDIGO), and a property manager (PROPIETARIO). The block of text adjacent to the characters further explains the officer and their role:

## **CODE ENFORCEMENT OFFICER AND LANDLORD**

*Code Enforcement is a section of the Atlanta Police Department that makes sure landlords are **obeying the law and keeping you safe**. For example, if your landlord has not fixed a leak in your home, you can call Code Enforcement and submit a complaint. Once your complaint is received, they send out a Code Enforcement officer to inspect the leak. If the officer finds a code violation, they will write a report and speak to your landlord. The Code Enforcement officer will order your landlord to fix the leak as soon as possible or they will be cited. The Code Enforcement officer will return in a few days to reinspect your apartment and make sure the landlord has fixed your issues. Remember, **Code Enforcement officers are here to help you; they can only help with the issues in your apartment building.***

We discussed the above visuals and text during a design meeting:

**Eric:** *So now on the bottom, I think what's important is what I gathered for what Peter was saying, is trying to introduce the process and the players in the process. Specifically the sort of problematic with code enforcement, the lack of trust of the officers specifically.*

Indeed, code enforcement falls under Atlanta's Police Department: an entity that does not have a good relationship with immigrant communities in the city nor Immigrant Affairs. Our responsibility in Peter's eyes is to "*get people to trust the [existing] system, trust code enforcement, and trust them with their information...*"

Molly reflected how this expanded visual reinforces one of their goals:

**Molly:** *Yeah, like, it just helps with overall like one of our roles in the community*

*too is just kind of differentiating, what different agencies and individuals are like, what their roles and thank you landlord is not connected to code enforcement. Those are separate things like that visual is like good to just help us reinforce that.*

In sum, while the design process did not directly engage residents, by drawing from Immigrant Affairs' extensive experience of interacting with immigrant communities, we attempted to account for and reflect the history of local distance between the city and immigrant communities. This is vital to the initiating stage of trust which is often called "calculus based trust" because without any relational history in place (or negative history) trust relies more heavily on calculation of available information. To this end, the information design of the code guide attempts to signal the city is beginning to take ownership of this distance to initiate a civic relationship. The guide represents an invitation to these distal communities by adorning it with the city seal's and crafting messages that convey goodwill and benevolence. The office, acting as the representatives of the city, hand-delivers this invitation to initiate the process of closing distance via the code guide.

#### *7.3.3.2 Focusing on Experience*

The second sensitizing concept *focusing on experience* reminds us that trust is built over time through the accumulation of experiences. It is both the opportunity for and quality of experience that reduces distances. To illustrate, it was the experiences of interacting with the Moore's Mills residents that over time enabled the office to produce and use trust to address the housing codes issues. Specifically, the demonstration of care and goodwill in the conversations between office staff and residents which develop the comfort and ability of residents to navigate the barriers they face in the code enforcement process. Thus, this concept suggested the design of Code

Enforcer needed to support conversation and to provide a series of interactions that alleviate barriers faced by residents in the code enforcement process. By doing so, the system would be better able to support building the trust that has been initiated.

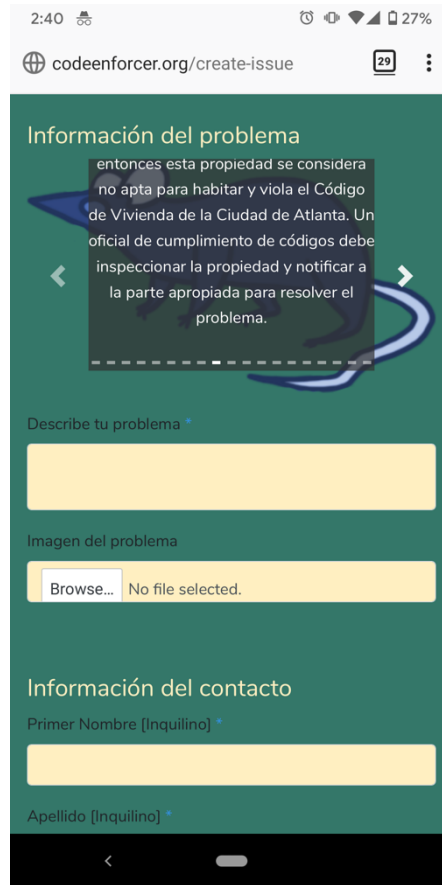
The first part of the user experience with the system occurs within our goal of “meditating people where they are” with the code guide. To accomplish this goal, the code guide was designed to support the conversations between the office and communities. To illustrate, the large visual of the kitchen at the center of the guide (figure 4 center) is designed for the staff to *show* the different code violations to spark conversation rather than *explain*. Showing the violations visually rather than explaining the legal details or exact ordinances from the city’s code manual is the design’s way of reducing complexity—the main purpose of trust (Luhmann 1979). Too much information and text can increase complexity and become a distraction to the conversation by constraining the natural ebb and flow of the interactions. While facts and information are important, and the staff provides these while in conversation—it is ultimately the conversation that breaks down the initial fear and reluctance to follow through with code complaints. To this end, the design is light on text in favor of compelling visual design. Even the guide’s form factor, being only 11\*17 fully unfolded, is a conscious decision to make sure the design does not take up too much space in face-to-face encounters.

These design decisions all relate to our attempts to avoid falling into the trap I reviewed in chapter two: trying to activate trust purely through the cognitive means by providing enough “facts” about codes or code enforcement. The key to closing social distance is making people feel closer to the civic system, to see themselves in it, which enables them to engage in it. As the bridge to enabling such engagement, the design needed speak to people and relationships, rather

than data. One way we attempted to speak to people and relationships is through the visual of the officer shaking hands with the resident on the cover. Here, we attempted to humanize the “officer” with a friendly depiction of the encounter with the resident.

Another way we attempted to speak to people and relationships is by including the office staff's picture on the guide's cover (figure 4 lower left). The picture affords the sense of “*we’re here with you.*” Much the same as a family picture in the living room or a gift or a physical memento. After the conversation between the office and residents with the code guide, the next part of the user experience are the interactions with the system’s digital components. The primary digital component is the issue request webpage (figure 5). We knew there would already be a great deal of reluctance for people to go through with requests, so the experience of interacting needed to be as smooth and frictionless as possible. Indeed, if the resident encountered any hardships during the process of interacting with digital components, the positive expectations necessary to go through the process might be lost to fatalistic attitudes. Keeping this in mind, we made the following design decisions.

First, we knew that many communities did not have desktops or laptops and some do not have access to internet. We also knew that many would be uncomfortable to download an app. Thus, we made the issue request component a simple, mobile responsive webpage. The URL to the page appears in the code guide so the staff could walk residents through making requests in real-time. This helps to capitalize on the momentum and energy of the conversation. The page does not require a login or any form of user account to use. The page asks only for the bare minimum of information necessary for the request. Upon completing the form, the system sends the resident a text message with the a link to the letter generated with the information from the

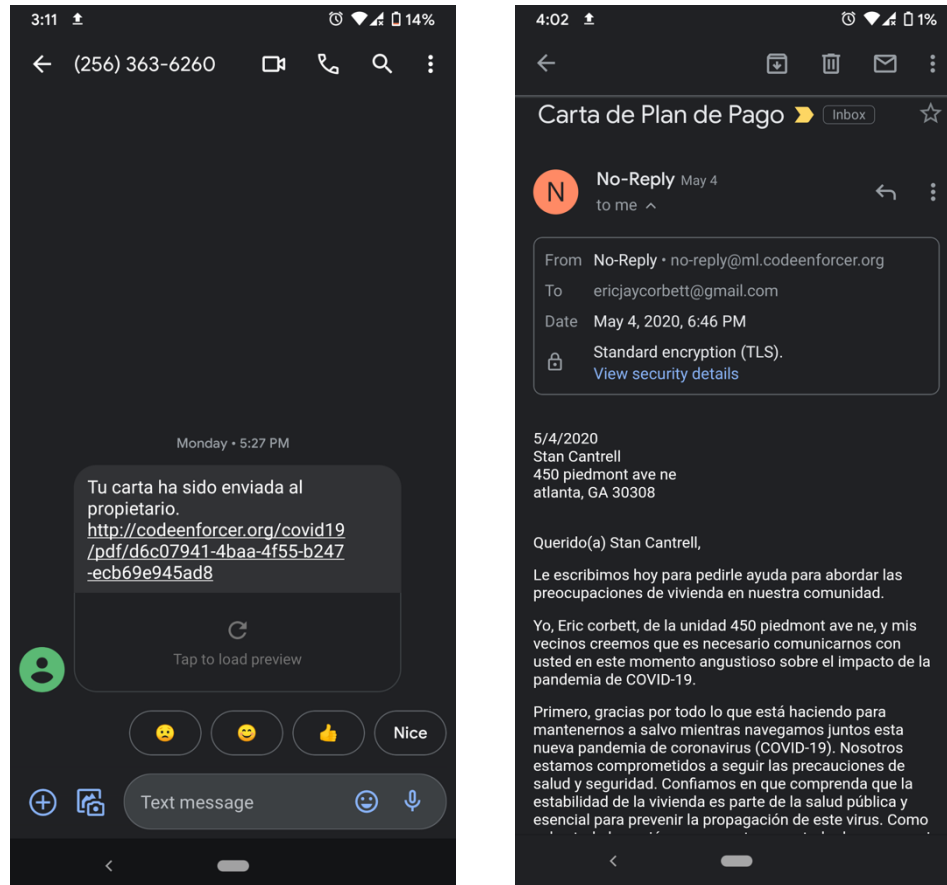


**Figure 5. Issue Request Webpage.** Mobile responsive and does not require a login or downloading an app. All the resident will have to do is type in the URL to the webpage and this is what they will see: a form for submitting a request for repairs. Resident selects the type of code violation their issue falls under using the image carousel, a text field for residents to input a description and picture.

issue request page (Figure 6-A).

One of the most significant barriers to getting the letter sent was the use of email. It turns out that many communities the officer interacts with either don't have email or are not comfortable with using emails. This presented a challenge for delivering the completed letter. To address this challenge, the system sends the letter on behalf of the resident via a "no-reply" email (figure 6-B). The no-reply is key as property management will have to contact the resident by phone using the information in the letter. Several days after the letter is sent, the system





**Figure 6 A-B. Text message to resident and email sent to landlord**

sends a text message to the resident to query if they have heard back from the property manager regarding the issue. The text message contains “Yes” or “No” options via URL links. If the resident selects no, the system sends the residents repairs request letter to code enforcement via email. This interaction is a significant part of the user experience as it obviates the need for the resident to request the repairs via ATL 311 which the office has found presents several usability challenges for residents.

In sum, by supporting the conversations with the code guide and then chaining together the digital interactions in a simple flow using mobile webpages and SMS communication, Code Enforcer seeks to provide an experience that will allow the office to build trust through these

encounters. With these series of interactions we removed several barriers preventing interaction with the code process: the lack of information system for documenting repairs, obviating the need for email throughout the process, and then providing a simpler access point for the code enforcement. The system is novel in that it combines digital and non-digital components to provide an experience that allows trust to be initiated interpersonally and then leveraged into institutional interactions via the system's digital components

### 7.2.3.3 *Mediating Expectations*

The third sensitizing concept *mediating expectations* reminds us of the importance of forming and maintaining expectations for building trust. Indeed, trust is fundamentally the process of how one comes to form positive expectations in the face of uncertainty (Mollering 2001). To illustrate, in order to progress trust in the Moore's Mills issue, the office first needed to help residents form positive expectations about the code enforcement and then follow with maintaining these expectations as the process unfolds. Undoubtedly there will be setbacks, delays, and failures that will disrupt the expectations necessary to continue. Thus, this concept suggested the design of Code Enforcer should afford the formation of expectations and provide features that support maintaining those expectations throughout the process. By doing so, the system would be better able to support building trust further.

The layout of the code guide (figure 7) and communication features of the system (figure 8) are where the third sensitizing concept's influence is most salient. First, we attempted to help with forming expectations through the layout of the code guide (figure 7)—the panels, the ordered list of steps, the information of what happens through each step—to help residents form expectations of this process. For instance, step 3 in the top right corner sets the expectation for



**Figure 7. Back side of the Code Guide.** Introduces residents to the Code Enforcer system's digital components. Set expectations of the code enforcement process with a simple, visual guide of the process

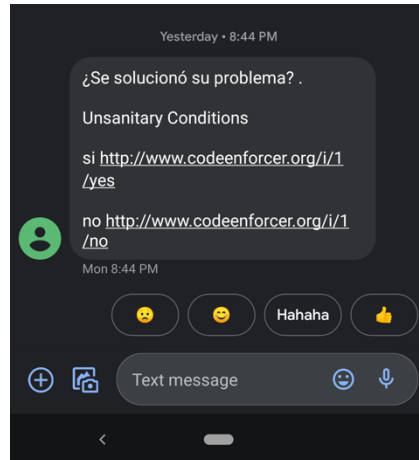
what happens after submitting the repair request to property management:

### Step 3: HAVE REPAIRS SUCCESSFULLY

*If your landlord does not contact you or refuses to make repairs, contact your local code officer and continue to the next step. [If your issue is severe, your landlord should fix it 24 hours. If your issue is not severe you can give your landlord 2-3 business days to fix it.]*

This message sets expectation then follows up via text message to maintain those expectations. Seven days after the request has been submitted, the system sends the resident a reminder text message to maintain that set expectation (figure 8).

Steps five and six set expectations about the code officer:



**Figure 8. Follow-up text message sent by the system.**

**Step 5:** *Code Enforcement Officer will contact you to make an appointment: Remember, code officers only want to give you a safe home for you and your family. You have a RIGHT to ask for an interpreter and be served in your language.*

**Step 6:** *Code Enforcement Officer will contact landlord if inspected issues are code violations: Code enforcement officers do not care about your immigration status or what language you speak. They want to help you.*

To achieve our goal of “navigating organizational accountability”, we separated the flows of the process: the process of making formal requests to property management (1, 2, 3) and the process of submitting delinquent requests to code enforcement (3, 4, 5). This is vital Moly reminded me during a design meeting:

**Molly:** *Yeah, like, it just helps with overall like one of our roles in the community too is just kind of **differentiating, what different agencies and individuals are like**, what their roles and that **your landlord is not connected to code enforcement**. Those are separate things like that visual is like good to just help us*

*reinforce that.*

Separating these was key as the code enforcement process should only be invoked when the property management is non-compliant. This is vital Peter remarked, “*there needs to be effort before code enforcement gets involved...*” otherwise “*code enforcement will get overloaded with cases...*” “*Landlords need to be given a chance..*” While this is true, it is also true that residents might have been intimidated in such a way that prevents them from starting with a request to landlords. To counter intimidation, Michelle suggested it would be important to make it clear somewhere in the code guide that it is against state law for landlords to retaliate against such requests. As such, at the bottom right corner (starting at IMPORTANTE) contains the message:

***IMPORTANTE***

***IMPORTANT: If your landlord threatens you or confronts you with any intimidation, contact immigrant affairs immediately!***

The ending of the process, step 7:

***¡CONTACTE CON NOSOTROS PARA HACERNOS SABER QUE SU***

***PROBLEMA FUE ARREGLADO!***

***CONTACT US TO LET US KNOW THAT YOUR ISSUE WAS FIXED!***

raised some tension about mediating expectations:

**Luke:** *Yeah, because if the issue isn't fix, and they have to reach out to us, then the only option would be to like, I don't know if it's the only option but from our phone call yesterday is like to like sue the landlord, right or to file a small claims case, right?*

**Molly:** *Well, yeah, one I don't know why they should have been fixed because that*

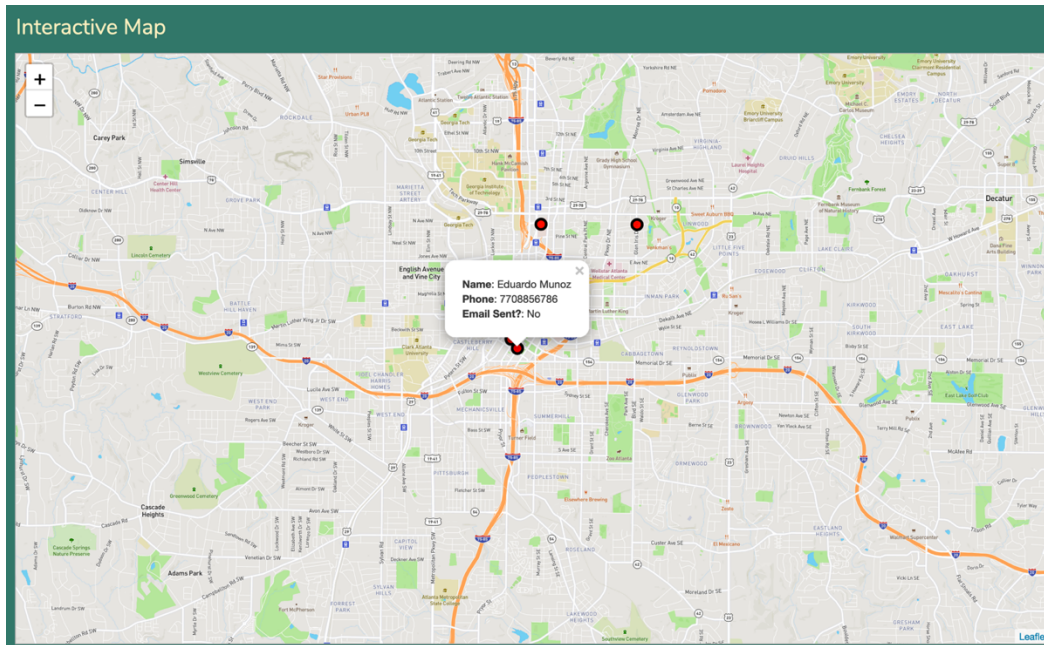
*Well, I mean, then that should really be pulling back into I don't know. Yeah.*

**Molly:** *Like if it's not fixed, what are them doing it? We're just telling them to call code mercy. Yeah. Right. Are we just like doing advocacy with code enforcement because they're not doing their job?*

Here, the office was concerned with making themselves accountable for situations wherein a resident might have gone through the entirety of the flow of interactions with both landlords and the code enforcement but still did not get their issue resolved. The office was concerned about what (if any) action they could take (as the design suggests that they should/will *IMPORTANTE CONTACTO UNO MUCHAS*) when in reality, the office has very little ability in that case other than referring residents to pro-bono legal services. While this tension with expectations and accountability stirred up in the wording of one small portion of the guide could be resolved easily enough, it was reflective of a more substantial dissonance between the designer and co-designers interpretation of trust that in many ways was unresolvable.

Trust is a process of forming expectations—it is expectations that allow one to overcome uncertainty to take actions (Mollering 2001). Accountability plays a key in expectations—who or what will be accountable for the risk that I should undertake? Who is accountable for the power I give as I trust? The design attempts to—as best as possible—make expectations clear. As such, the design's goal was always explicitly about expectations, but in doing the designing, I was less explicit in how I was materializing accountability. Indeed, throughout the design process, I had been making the office explicitly accountable for this process in ways that they are not (or have been at times but would prefer not to be). I return to this tension in more detail in the discussion.

#### 7.2.3.4 Preserving Relationships



**Figure 9. Issue Map:** This component provides a visual interface for the department to monitor residents' interactions throughout the process. This component is ONLY visible to the department staff. It is not publicly accessible or resident facing. Access to the map is password controlled. Every resident request will create a color-coded icon which represents the current status of the issue.

The fourth sensitizing concept *preserving relationships* reminds us that trust is dynamic and must be preserved over time. Indeed, trust is not an end-state, but rather it is always “in-the-making” as the trustee and trustor continuously (re)produced conditions of closeness. To illustrate, even after resolving code issues, the office visits and maintains contact with residents to preserve relationships. By remaining close, they are able to use the trust they have developed to address a range of other civic and social concerns impacting immigrant communities. Thus, this concept suggested that the design of Code Enforcer should help to support preserving the relationships developed while addressing the code enforcement issues. By doing so, the system would be better able to retain trust.

The issue map component of the system is where the influence of the final sensitizing concept is most salient (Figure 9). The maps serves two purposes that both help to preserve

relationships. First, it acts as a visual interface for the office to monitor residents' interactions throughout the process. Every resident request will create a color-coded icon representing the current status of the issue on the map using the address supplied from the issue request page. A red icon is created when a resident first requests a repair to the landlord. The system sends a text to the resident to check if that repair is made several days afterwards. In the text, if the resident clicks the “yes” link then the original red icon is updated to green, if “no” it is updated to orange and the resident request is sent to code enforcement. Thirty days after it is sent to code enforcement, the system sends another text to the resident asking whether code enforcement resolved the issue. Clicking the “yes” option updates the icon from orange to blue whereas “no” updates it to yellow. Thus, these visual updates help with preserving relationships by providing the office a way to monitor and track how people are (or not) going through with the process after being introduced to the system.

In the short-term, the visual monitoring attempts to help with persevering relationships by resolving individual code complaints. In the long-term, it also attempts to leverage the individual wins to use in more substantial political change:

**Eric:** *So then when you look at the map, like say, for over the course of a couple of weeks, you can see Oh, here's the green ones are not fixed, the red ones are fixed. Right? just gives you an idea, right? And so when you show this, you know, if you were trying to communicate issues that are going on, you know, you can imagine being in this meeting room and connecting your laptop and sit down like, this is what's going on. See this, you know, we got all this data. And then we can take that in different directions, you know, which, whatever you guys think might be useful.*



**Molly:** *it would be like it would be good for us if we were like talking about the issues with people in City Hall: look at this apartment complex, look at all of these issues. Yeah, I think that could be useful visual.*

Here, rather than simply ending the interactions after successfully resolving individual code issues, the system collects and represents the issues through the map to arm the office with the data to make the larger argument for more robust code and housing policy. In this way, the visualization preserves the political capital earned in individual code violations wins by transforming it into the larger intuitional relationship between the office and residents towards collective civic action for advancing housing justice for immigrant communities in the city.

#### 7.2.3.5 *Generating Features and Affordances*

The sensitizing concepts were used to inform designing with trust by putting the insights developed from the analytical work with the previous two elements (e.g. the local and hyper local distances, sociotechnical components and system goals) into conversation with the design knowledge reflected by each concept. This created an iterative, dialogic process where specific features and affordances of the system were generated: the information of the code guide, the flow of the user interactions, the layout of the code guide, and the communication features of the system, and the issue map component of the system. Taken together, these features and affordances are the socio-material means of closing distance.

## 7.5 **Discussion**

I used the design process of Code Enforcer as a probe to answer my final research question R4: *how (or not) do the elements—distance, sociotechnical components, and sensitizing concepts—inform designing with trust?* Each element guided designing with trust throughout the key parts of the

design process of Code Enforcer. First, I found using distance as an analytical lens framed the system's purpose around the distances that would need to be closed to enable trust. Next, I found by taking a sociotechnical perspective, the goals and key components of the system were identified and configured towards closing distance. Last, I found using the sensitizing concepts in generative design informed ideas for features and affordances to support the process of closing distance.

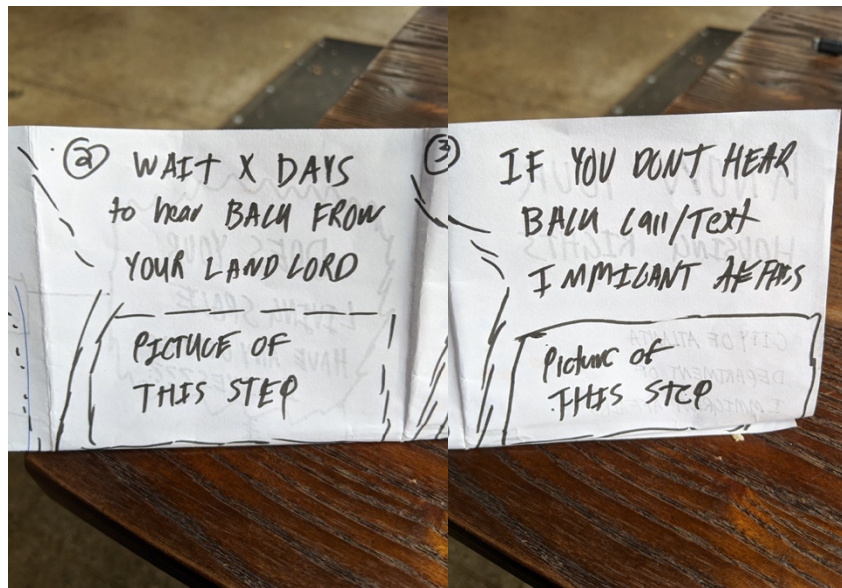
To paraphrase Buchanan's thoughts on design theory (Buchanan 1992), the elements informed "*a descent from chaotic environments*" of city code enforcement, landlord-tenant rights, sociopolitical climate of immigration in the US, the goals and work of the Office of Immigrant Affairs "*to the unity provided by symbols and images and interactions*" represented by the system. In this regard, I argue the elements did successfully inform designing with trust. That being said, tensions arose throughout the design process and remained still (unresolved) in the final form of Code Enforcer in many respects. Indeed, at times my specific interpretation of trust (guided by the elements) conflicted with the offices' interpretation. In what follows, I discuss three prominent tensions that reflect the messy reality of designing with trust.

### **7.5.1 Mediating or Withdrawing Trust Work?**

One of the goals of the design process was to mediate the *trust work* the office performs to address the housing code issues. However, as the design process of Code Enforcer progressed and the functionality of the system became more clear, the staff began to seek out opportunities (afforded by the design) to withdraw themselves from performing this work. For instance, in one of the earlier design iterations of the code guide for steps 2 and 3, I presented the following the process flow:

**Eric:** (step 2) The next step to that is they're going to wait X amount of days to hear back from their landlord...however long we think that is, and then if you don't hear back, you know, call or text the office of immigrant affairs (step 3)?

My assumption (based on my observations in the field) was that the office would be the contact point as they have been serving as mediators between code enforcement and residents when landlords refused to make repairs:



**Eric:** At the end of step three, wherein someone has requested a repair through our system: How much how much do you want to do between there and there? So once it's submitted to the landlord and I haven't heard back...

**Molly replied:** I would direct them to go straight to code enforcement.

**Eric:** So after this, so this step three should be go straight to code enforcement?

**Molly:** Yeah I think so.

**Eric:** so maybe on this on this on this, so once they upload their issue and they can see their issue. There is this button down there that says submit to code enforcement

*that they can click at their discretion. Yeah, maybe that's the way it goes....*

Here we see the system providing an opportunity for the office to withdraw themselves (*i.e. I would direct them to go straight to code enforcement*) from their more hands on style of directly mediating interactions between residents and code enforcement. As I noticed this withdrawing more and more, I reminded them that the design and use of the guide and the system was intended to be used directly by the office while in contact with people (reflecting the goal of mediating people where they are). Michelle pushed back against this goal, “*the goal should be to get people to be able to do this themselves.*” Molly concurred saying the ultimate goal would be to get people to interact directly with the code enforcement process. While people might need help and the office will assist as necessary “*we are not code enforcement, and the goal was never to have this take over our office*” Michelle reminded. She even suggested that they could even train a community leader to walk people through the process using the guides and pay them to go through the community. But again, the ultimate goal is for the office is to remove themselves from this process.

The offices’ turn to withdrawal conflicted with my interpretation of their *trust work* and how the design should mediate it. While the office is generally very hands-on and direct in how they do community engagement and perform trust work, they are at the same time very limited in resources and would prefer not to be bogged down in any one issue—especially not one with a clear line of responsibility and existing process like code enforcement. While this is true, I couldn’t help but to think that these withdrawal attempts would ultimately deprive the office of opportunities to develop relationships over the course of helping people through code issues.

To illustrate how these relationships develop, during a design meeting, I overheard Peter

having a phone conversation with the neighbor of a mother who called seeking help for her son who was having legal issues regarding his arrest for driving without a license. The son is undocumented and thus feared being deported as a result of this encounter. The stress of all this seemed to be causing him to have a mental breakdown: he stopped working, stop eating, and kept obsessing over his paperwork—and eventually turned himself into ICE. His mother is worried as the young man is the only source of income in the house and without him they will be forced to move back to Mexico.

After the phone call, Peter's conversation with Michelle caught my ear: "*She really trusts me...*" he remarked about the relationship he has developed with the woman who had called him. He said she has been really civically engaged and is a great resource on the ground in that community. I asked him "*How did you reach that point—how did you earn her trust?*" In his response he identified 'meeting people where they are' as the means to which he earned this trust but the way he articulated it revealed the key element of the practice:

**Eric:** "*how did you reach that point—how did he earn her trust?*"

**Peter:**

*"It wasn't even really me! I helped her, through our office, I volunteered to help with study for driver's license exam... and later I helped her file a complaint to the school when her son was getting bullied in school through APS"*

*"I guess through all that... I guess she saw results in both of those..."*

*"one time she was the victim of an assault so I came to her house and helped walk her through the process of filing the police report"*

*“but I think like it was clear, she got help through these issues, like the bullying, because APS sucks...”*

*“but...I just tried to help her the best I can and she totally brought into the system and the relationship which is great, that’s what its all about”*

*“but it was just like continuously talking to her, going to her house, and I think that is key, going to their house, meet them where they are at, and then go in and sit down and talk to them, just have conversations see whats going on whether we can help or not.. I think having that level of personal connection with someone who works for the government but is in my house, sitting at my table, listening to me, trying to help me...that really helps with trust.”*

First, as Peter reflected, *just hav[ing] conversations see[ing] what’s going on whether we can help or not....*” reflects the reciprocity in these encounters as even when the issues are beyond the scope of the office they listen anyways—after hours, on weekends—even when they have nothing to gain nor sell. Next, there is genuine concern and care about the challenges these people face from reflecting responsiveness as Peter reflected, *“level of personal connection with someone who works for the government but is in my house, sitting at my table, listening to me, trying to help me.”* Feeling like someone cares, someone took the time to relate, makes the distance between **“someone who works for the government”** feel less pronounced. Indeed, as Peter reflected, *“having that level of personal connection”* reflects the distance between “official” and “citizen” giving way to a civic relationship. This is the essence of *trust work*. Thus, while the system can remove barriers preventing residents from resolving code issues, does it also fall into the trap of creating distance by obviating that *“that level of personal connection?”*

As was discussed earlier in the generative design section with the sensitizing concept preserving institutional relationships, the system is designed intentionally to go beyond any individual successful code issue being processed to consider how the trust developed along the way can be leveraged and subsumed into the larger fabric of civic relations between residents and the city. In this way, successfully completing code issues is simply the means to greater ends of civic closeness—*that level of personal connection*—first with the office and then with the city.

I tried to push back against falling into the trap of removing barriers and creating distance:

**Eric:** *"And see, that's why I initially designed the system in such a way that emphasized that you guys would be there talking to them, because without that contact you lose that opportunity. But it doesn't scale. So that's the problem, you get more people submitting issues. But then if the larger point is about that relationship and that trust, then this sort of disembodied thing for people to upload a code issue, you don't get that other the other entry point to issues. You don't get those contact points in the same way..."*

**Molly interjected:** *"we can still do that initial contact the idea is just for them to be able to do it themselves eventually..."*

*"So that we can walk them through it the first time around but then they become empowered next time they can do it themselves."*

**Eric:** *"I figured as much and that's why when I initially was thinking about laying the components together, I was like, because really like getting someone to you know, do you know, to solve anyone code issue is really just an opportunity to, you know, invite them into the broader civic fabric of the city, right?"*

**Molly** - “*yeah*”

**Eric** - “*And how do you sort of expand from these issues to like other things? You see success here, right? But then, like, how can that lead to, oh, I want to participate in this. Well, I think I can also try to navigate this system or be more active....*”

In this case, the designer's agency came to play an active role in attempting to stay true to the interpretation of trust provided by the framework elements. The humanist in me, the trust researcher, resisted and at times rejected this notion of “**empowering them to do it themselves**” which to me reeks of austerity rhetoric and the logic of efficiency I reviewed in chapter 2. I couldn't help but to think that this perspective by the office would lead to the trap of *removing barriers* and *creating distance* exemplified in the opening example of this dissertation regarding ATL 311: a technical artifact designed to remove barriers (in terms of service transactions) but did so by disrupting existing practices within the social arrangements between a council office and constituents which resulted in social distance in these relationships.

Yet despite my interpretation, trust ultimately lies within the relationships between the office and the communities. And for the office, their goal is to “*get people to trust the [existing] system, trust code enforcement, and trust them with their information...*” So the office intends only to monitor the situation to make sure people are going through the process and that it works rather than inserting themselves into the space more directly as they have been doing.

### **7.5.2 Technical Delegation**

The above raises a more fundamental question about designing civic technology with trust: this tension is perhaps inevitable as delegation is technology's fundamental nature. Latour coined the concept of delegation with his example of the speed bump acting as the security guard



of the streets (Latour 1994):

*a 'sleeping policeman' or hump of pavement designed to slow the speed of cars. Speed bumps speak their own unmistakably concrete-language, that is, a special kind of technical articulation, which can be appreciated as a way to delegate meaning. Instead of having a police officer standing by, day and night, to control speed, traffic engineers delegate this work to speed bumps. The agency of the speed bump can be understood as a complex of a number of agents ranging from police officers, engineers, politicians and construction workers to different sorts of materials taken from various places and times. The speed bump is a certain kind of 'black box' or a 'technical delegate' that redistributes the absence and presence of these various agents and interferes.*

In the case of Code Enforcer, is the system itself becoming “the trust-speed bump” acting as the technical delegate of the office of Immigrant Affairs “in the street?” Could Immigrant Affairs simply leave copies of the code guide at grocery stores, community centers, and other locations where residents frequent without doing the work of talking people through the process? It appears this is their plan:

**Molly:** *But once people use this, they feel comfortable with the they get an outcome out of it, and then they're like, oh, and then they have buy-in then they might tell somebody else, but just to make it because like, ideally like, you know, they wouldn't have to physically talk to us to be able to use this right?*

If they are successful in their plan, then it begs the question: *is the system **delegating** trust work rather than **mediating** trust work?*

Over time societies have come to accept technical delegation in a wider array of human activity. Delegation used to be confined to the private sector and mainly impacted physical manual labor (Pacey 1983). Then, thanks to the advent of big data and algorithms, knowledge work has also begun to be delegated (Gillespie 2012). Now, societies face the question of delegation in the public sector with smart cities and algorithmic decision-making systems—regulating by robot so to speak (Coglianese and Lehr 2017). In fact, as I reviewed in chapter two, many of the technological attempts to mediate trust in the civic space reflect delegation of trust. My frame of trust and distance is critical of these approaches as they often end up achieving reliability (at best) rather than trust in the purest sense of goodwill. Yet, the reality is (especially now in the post-pandemic world) that delegation of trust will be necessary which raises several moral implications for our understanding of designing with trust.

Distance as a frame for thinking about civic trust carries an implicit normative stance on the role of public officials. Drawing from political philosophy of trust and democratic theory, I argued closing distance is a moral imperative for public officials, which is vital to addressing the crisis in trust. To close distance, they must perform *trust work*. I framed the ends of *trust work* not as reaching a static point where trust is “obtained” but rather as the work of producing and reproducing the conditions necessary for trusts’ enactment. Here, I drew from Mollering’s notions of “trusting” which “*expresses that the object of [trust] study it is not just a measurable outcome (i.e. attitude or behavior) but the particular ways such outcomes are produced and used.*”

Trusting presents a moral challenge for the idea of technical delegation of trust. By moving the means of producing trust to technology and away from relationships, trust becomes an

outcome frozen by this reproduction rather than earned and re-earned through the work. Thus, if Code Enforcer could become “the trust-speed bump” acting as the “office of immigrant affairs” in the streets, it begs the questions of what trust (if at all) is earned? Distance as a frame suggests none; as trust is the product of *closeness in human relationships* that is earned through *trust work*.

Resolving the larger philosophy of technology and design questions raised by delegating trust is beyond this dissertation's scope. Moreover, without deploying and evaluating the system, I can only speculate on if Code Enforcer would become a “trust-speed bump.” For now, it seems the office leans more toward seeing the system as a mediator rather than a delegator:

**Molly:** *we're going to be in the community. It's like, we might be like the first attempt of walking people through the app. So if you like, the idea is like, they're going to have our contact information and like, if they get to step three, and they're confused, like, I would hope that they would reach out to us yeah. And I think that's what will tell them but like, I don't know if that should be a step because like, ideally, like because we just want to like, again, like **have people remove us from the process...** **The more people can go through the whole process without us, the better.***

After a longer back and forth, Michelle reflected on the office's and my own goals as a researcher throughout this design process: “*How do we institutionalize these structures and what is the role of trust in that?*” Michelle reflected on the importance of this, “*we're not going to be around forever...*” Her remarks echo how Latour describes the process of designing technology can be understood as “*making society durable*” (Latour 1991). For Michelle and the office, Code Enforcer presents an opportunity to make “trust durable.” Indeed, the decisions about the system

we are designing—once made solid—will make specific social and political relations between the city and immigrant communities more durable.

### 7.5.3 Resisting Neoliberal Design Logic

The larger conversation about delegating and withdrawing boils down to the existential conflict between neoliberal design logic and trust work that foregrounds this dissertation. To illustrate this conflict, consider Michelle’s remarks from an earlier interview during the Living Cities project:

**Michelle:** *“We want to serve so many people, in so many ways. But to really identify the issues and be really strategic about how we want to address those issues and in that strategy have it be about where do we have the biggest impact with our limited resources. Because unfortunately, any government or community organization will say the scope of the problem outweighs the resources that we have. So how do we use our limited resources to really effectively have the most impact?”*

Here, Michelle struggles with interpreting *trust work* through neoliberal logics’ notions of creating value and pursuing efficiency. While the above remarks predated Code Enforcer, the design process made the existing tensions between efficiency and *trust work* explicit.

At times throughout the design process the efficiency of getting residents’ code issues recorded and processed via the system was emphasized which deemphasized the need and value of *trust work*. At other times, efficiency was made subordinate to *trust work*; for instance, the text messaging amplifies the offices’ ability to set and maintain expectations at a scale impossible for them to do manually. Likewise, the issue map leverages the use of “big data” and visual urban analytics techniques popular in smart cities modes of governance. Taking the map a step

forward, one could imagine the application of machine learning techniques to predict where and when code issues might occur in these communities via the data the map captures. The larger point takeaway from these features and affordances is that efficiency and ease of use of the system (as was discussed through the sensitizing concept focusing on experience) is certainly paramount to enacting trust and to that end we did optimize the “user experience.”

Emphasizing trust work and closing distance is not inherently anti-technological nor technologically repressive. Rather the conflict with technology occurs only when efficiency becomes the sole and only way we think about enacting trust—obscuring other opportunities—for supporting relational interactions as Gordon warned (Gordon and Walter 2016). Thanks to the sensitizing concepts, the design process managed to resist this trap even while it sought to leverage the full spectrum of modern communication technology. That being said, more often than not, efficiency ended up being the primary value of the system in the office's eyes. For them, the act of design itself was inextricably linked to the pursuit of efficiency as the means to enacting trust. In this way, efficiency was an “end-in-itself” rather than the means to closing distance.

The offices' views echo Julier's thesis I reviewed in chapter two: that we cannot understand contemporary design apart from neoliberalism; we must see how design plays an active role in “*forming socially shared adherences to certain ways of working and thinking in economic worlds.*” In this light, the tensions that arose throughout the design process are not only obvious but expected: there is no escaping neoliberal design logic outright (outside of speculative design or critical design practice); rather, the design process guided by the elements provided (limited) resistance for civic designs' ongoing adherence to our current economic world.

## 7.6 Conclusion

In this design-ethnographic study with Immigrant Affairs, I had two goals to accomplish. My first goal was to evaluate how do (or do not) the elements of distance, sociotechnical components, and sensitizing concepts inform *designing with trust*? Despite the tensions that occurred throughout the design process whilst using the elements, the purpose of the system remained intact at a high-level: Code Enforcer is a sociotechnical system designed to close distance in power and knowledge that make immigrants community especially vulnerable to housing code violation abuse. Code Enforcer guides and assists residents in getting code violations resolved by helping them to hold property management accountable. The system is still introduced through “meeting people where they are” (to some extent) and contains features and affordances that would allow the office to cultivate their own relationships with community members while helping them to navigate the code enforcement process. The system is intended to help people “trust the code enforcement process” and symbolically represents one attempt at closing the social distance between the city and these communities. Ideally (in the offices’ and my own mind), the success of closing distance in this one specific area of civic life would lead to immigrant communities feeling closer to their government and more likely to engage other aspects of civic life.

My second goal was to evaluate how the system did or did not mediate *trust work*. Code Enforcer was designed to mediate the *trust work* performed by the office immigrant affairs. This second goal would have been accomplished through deployment and evaluation of the system within the office. In this evaluation, I would have observed the office using the system to interact with residents. I would have asked them to reflect on their use of the system, how and if it

impacted their work. What specific part of the system could they point to such impact? If they could recall an especially difficult or pleasant interaction? What if any impact did the system have on their new or existing relationships with the communities? Did the system impact trust between yourself and communities? If so then how? If not then, why? What could help in that regard?

Prior to the covid pandemic, the staff was excited to get out and use the system, and we currently plan to deploy as soon as possible. Their eagerness to use the system suggests that—even without a proper field deployment—the design is desirable and potentially very useful. This is to be expected by way of the co-design approach the office was engaged throughout the design process. Therefore, even while I did the actual “designing” and wielded significant power in directing the design, I encouraged them throughout to take ownership *“this is something you all will use not me so tell me what is working or not working.”* Even when the tensions were raised, I would nudge and prod but ultimately acquiesce as I knew the end goal was for them to use the system rather than the purest manifestation of my design elements. In this way, the well-known challenges of buy-in, support, and organizability alignment that can derail or limit adoption of workplace technologies (Grudin 1988) seems to have been avoided.

Returning to digital civics scholarship, the design process of Code Enforcer parallels similar work (Asad et al. 2017; Kozubaev et al. 2019; Peacock, Anderson, and Crivellaro 2018) yet the civic imaginary it opened took place within a public institution. In this way, this design-ethnography provided the opportunity to further understand the constraints and opportunities for digital civics from the inside-out purview I have illuminated throughout this dissertation. From the inside-out, the design seems to have been a success; outside-in—measured by how the

residents would use and respond to the system—remains (for now) unknown.



## CHAPTER 8: Trust, Distance, and Design

This research posed and answered the following questions:

*R1: How is the work community engagement currently practiced in local government?*

*R2: How is trust operationalized in the work of community engagement?*

*R3: How can trust orient design of civic technology around closing distance?*

*R4: How do the elements inform designing with trust?*

What started out as a simple investigation of the work of community engagement in Atlanta in R1, quickly evolved into a much larger philosophical inquiry of **trust** in civic relationships, how **distance** impacts those relationships, and the role **design** should play in addressing the crisis besetting American democracy (Corbett and Le Dantec 2019a). To recap this evolution, the public officials I researched through R1 filled in piece by piece how community engagement from government that invites participation from residents is often about the work to overcome distance—the trust work to embrace closeness. What I discovered about trust work through R2 is how this work is often constrained by the technology in the hands of our public officials. Here, I saw an entry point for design that I pursued through R3 when I began to develop an understanding of how to design with trust. Finally, through R4 I was able to complete my understanding by designing with trust in my research with Immigrant Affairs.

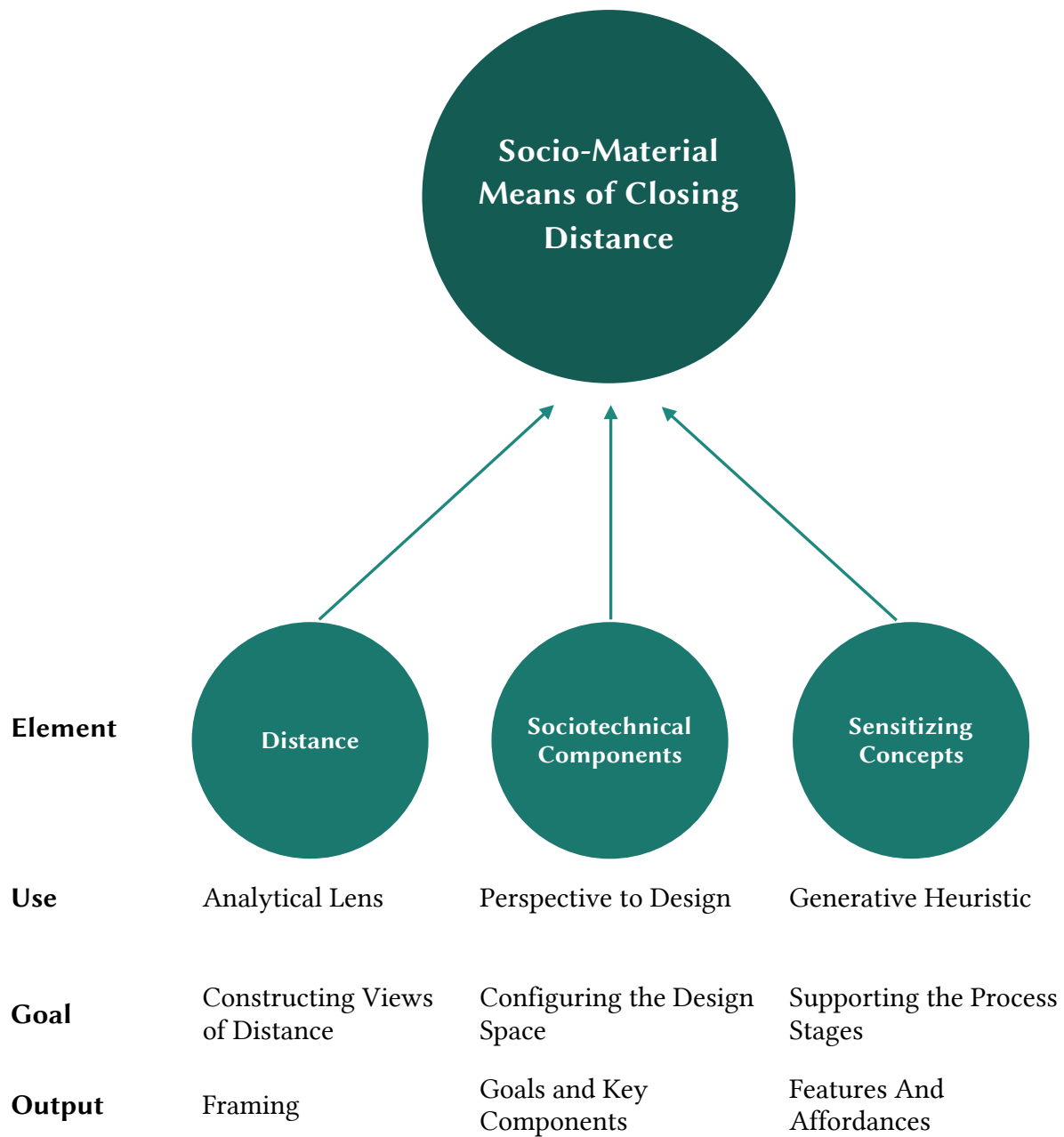
While my research ended up centering on design, along the way it made several other important contributions. R1 provided an original empirical investigation into community engagement— an understudied site for computer supported collaborative work—in my field of HCI (Corbett and Le Dantec 2018c). R2 contributed a novel understanding of trust in civic relationships from the understudied perspectives of public officials (Corbett and Le Dantec

2018b). R3 used the empirical and conceptual foundations developed in R1 and R2 to close a crucial gap in the digital civics agenda by expanding the space of design to include the vital role of public institutions in civic relations (Corbett and Le Dantec 2018a). Finally, R4 tied together how the key findings developed from R1 to R3 provide a better understanding of how to design with trust (Corbett and Le Dantec 2019b).

I begin my conclusion by first describing how the elements from chapter seven construe a design framework, the primary contribution of this dissertation, Trust Work. After introducing the framework, I step back to discuss how it provides resistance to the domination of efficiency in civic design. I then argue the framework can support and further digital civics' relationality agenda. Finally, I end with discussing how my framework provides a critical approach to enabling trust in the crisis. I wrap up by discussing two areas for future work to further develop the framework: developing distance as a method and how to navigate the moral challenges when designing with trust with public officials.

## **8.1 Trust Work**

According to the influential design scholar Bill Moggridge, frameworks are instructive to design practice as they help designers “*form a way of thinking about and evaluating possible design ideas*” (Moggridge and Atkinson 2007). Frameworks are “*a form of synthesis*” about a problem space that “*clarifies issues by applying insights that create the first level of order from the chaos of all the constraints.*” Moggridge argues frameworks provide “*a generalized likelihood of a much more chaotic individual reality.*” I extrapolate the findings in chapter seven, which showed the ‘*much more chaotic individual reality*’ in order to provide ‘*a generalized likelihood*’ of designing with trust through a framework I call “Trust Work” (Figure 1).



**Figure 1. Trust Work Framework:** The large circle at the top of the diagram defines designing with trust as an activity to discover the socio-material means of closing distance. The three circles below reflect each element's contribution to discovery: the use of each element, the goal of using the element, and the resulting output for design.

The framework advances a specific definition of designing with trust: ***it is an activity to discover the socio-material means of closing distance***. This definition serves two purposes for the broader goals of this dissertation. First, it provides a moral imperative for public officials that is vital to addressing the crisis in trust. Second, it provides digital civics a way to pursue trust in design of civic technologies that aligns with its normative political relationality agenda. In what follows, I detail the framework with the iterated versions of the three elements from chapter seven.

### **8.1.1 Constructing Views of Distance**

The first step of discovering the socio-material means of closing distance is to locate distance in the design space. Ethnographic methods are especially well suited here as one must search for and interpret the experience of distance. To construct a view of distance is to use distance as an analytical lens in an “etic-style” approach to research (“the use of pre-existing theories, hypotheses, and perspectives as constructs to see if they apply to an alternate setting or culture” (Olive 2014).) Thus, distance is brought into the space by the researcher and used as a lens to construct a local view of how it is manifested in the design space. In the case of Code Enforcer, these views were the local and hyper-local distances the office was working to close in their ongoing efforts in the housing code issues.

This step does the foundational work of framing the design space around these local distances, which is vital as trust is idiosyncratic, so the ways in which distance will manifest will vary across different relationships and contexts (Mollering 2006). Therefore, much like Le Dantec et al once argued for approaching the values in Value Sensitive Design practice, I argue that distances should be discovered in situ “as local phenomena, expressed in a local vocabulary”

(Christopher a. Le Dantec, Poole, and Wyche 2009).

### **8.1.2 Configuring the Design Space**

Next, a sociotechnical perspective needs to be taken by understanding the current components of the design space and then seeking to reconfigure these components towards closing distance. This sociotechnical approach is significant for designing with trust as it helps to avoid the trap of *removing barriers* and *creating distance*. Methodologically speaking, this sociotechnical approach can be accomplished by taking an actor network style mode of research: tracing distances across the assemblage of human actions, technological actants, and social arrangements. In the case of Code Enforcer, this analysis allowed me to understand how distal institutional relationships between the city and immigrant communities would make centering the design of Code Enforcer as a digital artifact (i.e., a mobile app or a standalone website) an inappropriate approach from the standpoint of trust. This analysis began to configure the design space to the specific components and goals the system would need to close distance.

### **8.1.3 Supporting the Process**

Last, by using the sensitizing concepts in generative design, ideas for features and affordances to support the process of closing distance can be developed. The sensitizing concepts aid in abductive sense-making in design synthesis (Kolko 2010); specifically, in the process of “Insight Combination” where after initial design insights were articulated (the local and hyper-local distances, sociotechnical components and system goals) these insights were forced into a structured pairing with existing design knowledge (the four concepts and process stages). This pairing “*creates a new design idea that has a strong connection to both established best practices and to problem-specific research data*” (Kolko 2010).

“*Problem-specific research data*” like trust in civic relationships is highly idiosyncratic, and the kinds of distance that make trust harder to reach will have unique histories that necessitates a situated approach in design. That being said, the sensitizing concepts are useful nonetheless as they provide “directions along which to look” that should apply across a range of social situations. The sensitizing concepts can be iterated with the following declarative statements to make each more explicit and concise:

- 1. The designer should be looking at how the history of those involved in the design space can be accounted for and reflected in the design to initiate trust.***
- 2. The designer should be looking at the quality of the experience necessary to build trust.***
- 3. The designer should be looking at how the design can enable the formation and maintenance of expectations necessary to further build trust.***
- 4. The designer should be looking to preserve relationships in order to retain trust.***

Trust Work acts as an overarching framework with prescriptive elements (distance dimensions, sociotechnical components, sensitizing concepts and process stages ) that are used to determine individual projects. The first two elements—distance and sociotechnical components —work together to provide an initial analytic frame for understanding trust in civic work practice, then shift to a generative frame with the third element—the sensitizing concepts—which keeps trust central in ideation.

Public official are the “users” of the technology the framework informs, therefore co-designing with them is vital. The interventions the framework informs are intended to be used by public officials to mediate the *trust work* they perform. The emphasis on public officials reminds design to attend to the work of trust that must be taken up, in earnest, by public officials.

Trust informed interventions are not intended to replace the work, rather to mediate it. By arming public officials with technologies that close distance, Trust Work provides the sociotechnical scaffolding necessary to foster closeness in social and political relations.

## **8.2 Transferability of the Framework**

While the framework should be transferable to any efforts of designing with trust in local government, there are important particularities in my relationship with the Immigrant Affairs that might not be. In what follows, I reflect on the nature of my engagement with the public officials in the Immigrant Affairs to provide a clear picture of what parts of the design process of Code Enforcer were unique to the context of Atlanta and my relationship with this particular office. Specifically, I point out the *access* and *alignment* that were vital to the design work in chapter seven.

### **8.2.1 Access**

The first unique aspect of the design space was the *access* I was afforded to the office to do the work in chapter seven. I discuss two factors that contributed to this access: first is the age, and size of the office and second is the institutional authority of my university.

The size and age of the office was certainly a contributing factor to my access. At the time of my engagement, which began formally Tuesday October 2nd, 2018, the office was still in the process of establishing their priorities, organizational structure, and identity and place within the larger bureaucracy of city government. The Mayor's Office of Immigrant Affairs grew out of the "Welcoming Atlanta Working Group" started by the 59<sup>th</sup> Mayor of Atlanta Kasim Reed during his second term in 2014 (Immigration In Atlanta: Smoothing The Transition | Georgia Public Broadcasting n.d.). The group was tasked with providing recommendations to the Mayor

regarding how the city should support its growing immigrant and foreign-born populations. One of the 22 recommendations provided by the group was establishing an office dedicated to welcoming and integrating the city's diverse foreign-born communities. The Mayor concurred and established the Office of Immigrant Affairs in 2015 (Mayor Kasim Reed Celebrates Immigrant Heritage Month | Welcoming Atlanta n.d.) with five full-time staff members and a revolving series of interns and fellows.

When I reconnected with the director of Immigrant Affairs (roughly half a year after she participated in the workshops in chapter six), they were still in their temporary home office downtown in little five points. As we caught up and recapped the time since I last proposed this engagement, I couldn't help but to reflect on the irony and metaphor of "immigrant" that defines them as an office: that have only "recently arrived" within Atlanta's city government; they don't have a permanent physical "home" yet and have been "displaced" around various locations in the city do to renovations and restructuring at city hall; they often have to advocate for their "belonging" within the city structure—which ironically sits in the bed of civil rights ran mostly by African Americans who do not always display the kind of cultural empathy for minorities that are immigrants. Despite these challenges Michelle—a first-generation immigrant of Russian origins born and raised in Atlanta—exudes a joyously defiant demeanor that reverberates throughout her office and staff. Completing the metaphor of "immigrant" they embody the spirit of preservation and determination required to survive in their new land.

Another key aspect of my access was no doubt a product of the institutional legitimacy of the Georgia Institute of Technology. I was formally introduced to the office through my participation in the Living Cities project, as a researcher from Georgia Tech, where I interviewed



both the director and assistant director. I extended this initial contact with the office as they also participated in the workshops in chapter six. Part of the offices' interest in partnering with me was their desire to seek out the kinds of outputs Georgia Tech is renowned for throughout the city of Atlanta—innovation, efficiency, and ultimately legitimacy.

In hindsight, the office's size and age and my own institutional credibility from the Living Cities project and Georgia Tech was certainly a contributing factor to my design interests. In comparison with older entities like planning or public works—with entrenched bureaucracy, massive staffs, and established identities—the level of access I had to explore new ways of doing engagement and working with communities may not have been possible. This access allowed me to operate opportunistically: with the elements in hand I was searching for the 'nail to hit with my design hammer' so to speak. I was looking for distances to close and to demonstrate the kind of technical and design innovation to satisfy my degree requirements. My search eventually gave way to a specific focus on the issue of housing code violations.

### **8.2.2 Alignment**

The second unique aspect of the design space was the *alignment* of the office with trust work. The office itself was in many ways designed intentionally to do trust work—to serve as mediators between immigrant communities and the city. They do so by operating through a reflexive process of interacting with communities—learning where and when new programs or services need to be created or repaired. The office faces many challenges in doing this work that are in many ways typical of street-level bureaucrats Lipsky articulated (Lipsky 2010): they have chronically inadequate resources given their workloads, their goals are ambiguous and vague which in turn makes performance towards goal achievement difficult if not possible. Moreover,

because of the complexity of the tasks they perform, elaborate rules, guidelines, and instructions are improbable, so they operate with a great deal of discretion. That being said, there are a few key areas where Immigrant Affairs' work differs significantly from Lipsky's articulation. Illuminating these areas reveal their structural alignment with trust work.

The phrase "Street-level Bureaucracy" is an oxymoron referring to the paradox between "bureaucracy", which is a set of rules and structures of authority and "street-level" representing distance from the authority of bureaucracy. While Immigrant Affairs shares this distance from the central authority because of the freedom they have been granted to operate, which is typical of street-level bureaucrats, in their case, this distance is also a product of the alienation and marginalization they face within city hall. Indeed, Immigrant Affairs operates much more like a civil rights and community organizing group embedded in city government rather than an extension of the city's bureaucracy. As they challenge the city to be more amenable and assessable to immigrant communities, they often occupy an adversarial stance within the government, yet they are simultaneously marginalized in their efforts to enact change within it.

Another key difference is in how Lipsky noted street-level bureaucrats often draw from the settings of civic interactions to reinforce distance in power in official-citizen relationships. For instance, the setup of a courtroom with the judge sitting high above everyone else, how city departments typically have service desks, the fixed rows of seats in a classroom all face towards the teacher, etc., are all institutional designs that "*facilitate the functioning of the bureaucracies by drawing attention to the location of power and cuing expectations of clients.*" Institutional power is enacted through these designs by combining spatial distance through how "*clients must go to public officials rather than the other way around*" with social distance — "*client interactions are*

*usually isolated such that other clients have little knowledge about other clients.*” In contrast, Immigrant Affairs interactions with communities are carried out in such a way as to actively subvert this power dynamic. Indeed, through their primary trust work practice—meeting people where they are—they eschew institutional space by going out to “clients” trying to build connections among them (rather than isolating) in hopes of developing social capital which in turn could produce political capital to enact change in city hall.

In this way, the office itself—at a structural level—was aligned to the normative political commitments of trust work. This raises the question of how designing with trust would play out with civic entities that are more service orientated like Public Works or with entities that are not public-facing in their work like Watershed Management. Most of all, it raises the question of designing within entities that are beyond simply not being aligned to trust work but antithetical to it: entities that create distance intentionally or unintentionally. I take up this question in the future work section.

### **8.3 Distance and Democracy**

The novel conceptual relationship between distance and trust that serves as the foundation of the framework is an insightful way of understanding the crisis in trust. Specifically, distance as a lens helps guide how we can navigate the paradox of trust and distrust in democracy. Returning to the Knight Foundation’s report, we understand that: *“Trust is a critical element in the functioning of democracies, but it must be balanced: too little trust in government leads to political dysfunction, but too much trust can lead to autocracies.”* Here, the report adopts the widely accepted position of ‘balancing trust’ which reflects the complexity of navigating the paradoxical relationship between trust and distrust in democracy.

Indeed, it is generally accepted in the political science literature that an ebb and flow between trust and distrust is a sign of a healthily functioning democracy (Hardin 1999; Tyler 1998). This is because trust and distrust are two functionally equivalent social control mechanisms in democracy (Mills 2012): either of the two can motivate participation to control government but they do so in distinct ways. For instance, one can be motivated to attend a planning meeting through distrust of the developers and city council (at times more so than if trust was assumed e.g. NIMBY movements). In this way, distrust as a social control mechanism is activated when those under authority feel that power is being abused—distrust comes into play in order to re-order a system.

While it is true a certain level of realistic political distrust is essential for democracy (Hardin 1999), and it is also true that distrust is functionally equivalent to trust as a social control mechanism for democracy; the operating cost of distrust is far more taxing socially, cognitively and emotionally. As Luhmann's sociology of trust once noted: [distrust] *absorbs the strength of the person, making life more difficult, to an extent which leaves little capacity to explore and adapt to his environment in an objective and unprejudiced manner; hence allowing for him fewer opportunities...* (Luhmann 1979)." Quite the opposite of trust as a social control mechanism which is generative in operation: improving the overall function of government by enabling greater willingness to compromise on issues, increasing the ability to enact major legislation, as well as affording stronger commitments to less fortunate people (Uslaner 2002).

One way to navigate trust and distrust is looking at where the source of distrust originates from. According to the sociology of Barber, when the source of distrust originates from "***alienation*** that leads to the inability to expect competence or fiduciary responsibility, or

*negativism, or irrationality it is not healthy for a democracy as leaders need at least some grant of trust to govern effectively*” (Barber 1983). Alienation is the key phrase in Barber’s remarks—it is the “*state or experience of being isolated from a group or an activity to which one should belong, or in which one should be involved*” (Hobson 2004). Alienation infers distances: social, spatial, knowledge, as well as power which relates to how the crisis is often depicted as peoples’ experience of distance from governance—the feeling of being so far in alienation one “*can no longer understand nor effect it*” — that leads people to “*limiting it and ignoring it*” as a rational response (Levine, 2015). From this perspective, when distrust originates from distance then we should understand that distrust as not the kind that provides healthy balance to democracy but rather the kind that reflects a crisis: “*a time of intense difficulty or danger.*” Thus, a just society and its government would work to reduce the social, cognitive, and emotional taxes paid by distal publics. I argue this work of closing distance—*trust work*—is foremost the responsibility of public officials.

From the lens of distance, addressing the crisis requires more than immediate effort towards resolving any one particular source of distrust; rather, it calls for a rethinking of how distance comes to be structured in civic relationships between the public and their government. Part of this structuring has been foundational to representative democracy: a system in which citizens legitimize a government of divided powers but remain outside of—and thus distant from—that government (Urbinati 2006). But distance has also been employed strategically at different points throughout history. For instance, African Americans have experienced violent and systematic distancing from their government; beginning with the fundamental social distance imposed by the three-fifths comprise (Ohline 1971), to the spatial distance created by segregation of Jim

Crow's "separate but equal" laws (Woodward 2002), to the distance in economic power perpetuated by discriminatory loan practices, inadequate access to education, and work-place discrimination (Oliver and Shapiro 2013).

While I do believe this lens of distance would be instructive in generating corrective policy towards addressing the crisis; I am, much like the knight commission, not in "*a position to recommend changes to the democratic workings of American society, e.g., issues of gerrymandering, money in politics or specifics relating to political parties...*" Rather the commissioners limited themselves to making "*recommendations that aim to place media in a more trusted and trusting place, to address the role of technology and online media entities, to instill more responsible actions from our leaders, and to foster better-informed, more engaged Americans.*" Likewise, in my research, I limit myself to the design of technology in the crisis rather than non-technological concerns like media and professional journalism or the structure of government or electoral politics. Yet much like Dewey once remarked, the challenges facing the democracy might be best understood through the lens of design (Dewey and Rogers 2012).

According to Dewey, states and publics vary through time and place, which means that "***The state must always be rediscovered.***" Yet we increasingly do not, and the technology we design and deploy plays a role in stalling this rediscovery. Our current technology solidifies the ongoing neoliberal reconfiguration of civic relationships: the servants' recasting as a 'business' and the citizens' recasting as 'customer.' Rarely articulated is how this recasting impacts both how and what kind of trust we expect (and in turn mediate) in civic relationships. Businesses have a different fiduciary responsibility than government, yet as this distinction is blurred, and government becomes more of a business and business takes up more roles of the government so

too blurred is how we form expectations. Given that trust is fundamentally a psychological process of forming expectations in relationships, what citizens come to expect in regards to trust and governments' perception of those expectations is heavily framed through efficiency and transactionality. Design is impacted too: our collective civic imagination comes to expect design to produce technologies that pursue efficiency and transactionality as the primary means to improve trust.

## **8.4 Distance and Design**

I argue that by using my framework digital civics will be better positioned to produce design interventions that are grounded in and responsive to the crisis. Distance frames the end goal of designing with trust as a matter of closing distance which complements digital civics' relationality agenda. Digital civics cannot assume relationships exist a-priori to design. In fact, as Le Dantec and Fox once noted there is an entire class of work necessary to bring distal communities to the table that is often overlooked or presumed in design practice (C. A. Le Dantec and Fox 2015). Distance as a frame foregrounds design practice in this reality—in the need for the work of closing distance—to bring distal publics to the table as the starting point for the larger, more transformative goals of reconfiguration.

Without the explicit framing of closing distance, the importance of civic relationships can be deemphasized or lost completely in civic design. As I reviewed earlier in chapter (2.2), contemporary civic design frames trust through neoliberal logic. Through this logic, claims of “user friendliness,” “smarter cities,” and “bias-free decision-making” warp not only how trust is enacted through technology but also the very essence of its meaning. Such was the case in the opening example of ATL 311 from the Department of Public Works and the City Councilman. In

that case, the system's design falls into the trap of removing barriers (in terms of service transactions) but ends up creating distance as the relationships sustained by prior contact opportunities are disrupted. We cannot afford to continue to fall into this trap given the urgency of the crisis. As the Knight commission warned, *“this is not a time for complacency. Americans are not immune to history nor to the forces that have eroded—and in some cases eclipsed—democratic norms and institutions around the globe.”* This framing foregrounds the pursuit of trust in design in the purest sense of the word as a good-will (rather than mere reliability) by committing design not to the pursuit of efficiency or transactionality, but rather to relationality.

Heeding the commission's warning means we cannot continue to design technologies that mediate civic relationships between the public and governments without being cognizant of the distances these systems might introduce. Through being cognizant of distance, we can be more intentional with it in design. For instance, we might decide the distance created by systems like ATL 311 is a reasonable trade-off for the efficiency gained. In response, we might then explore other opportunities to close the distance opened. We might even consider a different design approach altogether that could increase efficiency without creating distance. More importantly, we might begin to proactively seek out distal publics to bring closer to governance as was the case in the Living Cities project or through the work of civic entities like Immigrant Affairs.

In closing, Julier reminds us:

*“Design sits at the interface between government and citizens. It provides the conduit through which governments reach people and the material culture within which people understand themselves and act as citizens. One may go so far as to say that design configures publics, producing different contexts and scales within which*



*people find themselves socially connected.”*

Trust Work provides the guiding philosophy these ‘*interfaces between government and citizens*’ should follow by orienting their design around distance in order to foster closeness in social and political relations.

## **8.5 Future Work**

There are two immediate areas for future work I will expand upon in my postdoctoral research: distance as a method and navigating the use of the framework in problematic civic relationships.

### **8.5.1 Distance as a Method**

The framework depends on the use of distance as an analytical lens to find and locate local manifestations of distance. This use of distance was modeled in chapter five and seven but more work is needed to fully articulate the method. Indeed, studying distance ethnographically is not straight-forward as the concept is typically researched through experimental methods of psychology. Social psychologists’ have developed many techniques for isolating distance and manipulating it through their experiments. Through experimentation, they claim to “capture” distance psychologically and quantitatively. Yet the notion of “capture” is not applicable to an interpretative, qualitative study of distance. Rather, it is more appropriate to consider an ethnographic account of distance as “constructing” rather than “capturing.”

Distance does not exist objectively allowing it to be captured, but rather it is construed based on subjective experience. Methodologically, this entails “looking” for distance in the field using the dimensions as loose etic constructs to guide “seeing” distance. After looking, one can use inductive thematic analysis typical of ethnographic work to relate findings back to the

dimensions of distance by using the dimensions as high-level codes to frame findings. In this way, the researcher constructs a view of distance in the space of study.

Even with the most accurate view, it is important to remember trust will always be an ongoing social construction, and like other social constructs it *“cannot be accurately measured as [it will] never stable enough to be pinned down in any quantitative way; attempts to do so oversimplify the phenomena.... In practice, actors do not move through different levels of trust in a linear and sequential way; they skip back and forth continually and, mostly, unknowingly, between times when trusting is vitally important to ongoing organizing and times when it is less crucial.”* With this in mind, any “view” is best understood as a snapshot in time.

Using distance as an analytical lens in ethnographic work will require reflexivity: *who constructs these views and from what vantage point?* Views must come from “somewhere.” In the research in chapter seven, the views were constructed through my relationship with the office of immigrant affairs: through attending meetings, observing them in fieldwork, and conducting informal interviews. Thus, the views of distance I constructed were entirely from their perspective. This presents some serious limitations as trust requires active agency by the actors involved in a relationship as trust is a *“social process involving the interaction of trustor and trustee with each other and with their social context”* (Möllering 2013b). That being said, to fully understand how distance would disrupt the process of trust in any relationship, one must engage the trustee (which in this project are the public officials in immigrant affairs) and trustor (the immigrant communities).

This fuller understanding was not possible for my work in chapter seven as I did not have direct access to residents outside of my time with the office during fieldwork. Rather, my

interactions with residents were entirely mediated by immigrant affairs. To supplement, I did draw from external media coverage and research on immigrants locally (Carnathan 2018; The Atlanta Journal-Constitution 2018) and nationally (Hispanics: A people in motion 2005), as well as cultural studies (Ross, Mirowsky, and Cockerham 1983) and social science (Holladay 2004), which helps me to triangulate my findings from the offices' perspective which gives me a chance to distance myself from them and critically engage the space. However, even doing that secondary research cannot provide an account of the lived experience of distance in a given relationship.

Finally, a “view” of distance has to come from someone. In the work in chapter seven it came from an African American male Ph.D. student in his early 30's trained in computer science and human computer-interaction who now considers himself a design researcher. I am not from Atlanta nor the south originally. Politically I lean left; I am pro-immigrant rights and generally view the politics of the Trump administration towards immigrants to be flatly racist. While I consider myself loosely to be an ally of immigrant rights, I am not an active activist. In fact, my work with the Office of Immigrant Affairs was my first direct experience in this political space. I came to the space as an outsider—unaware of the challenges and lived experience of immigrant life in Atlanta and America broadly. At times this was difficult as I am not at all bilingual and was often the only African American present in my field sites (the office is almost entirely Latin American). In this way, my presence in the field sites somewhat mirror the immigrants' experience: not knowing the language, culturally unfamiliar of customs, being in places of the city (immigrant communities) that were new and different. Indeed, I was socially distant from my collaborators in the office and the people they worked with. I employed my own trust work

at times to close this distance: going to lunch with the office, coming to events not directly related to my field sites, having informal conversations, etc.

The above thoughts contours what I have in mind for distance as a method. This method would also be the way of evaluating objects produced by the framework (like Code Enforcer). Evaluating requires answering the following questions: does the design intervention reduce distance? Or create more? Does it work in one stage of the trust process more than the other? How does it (or does not) impact trust-related behaviors such as cooperation, information sharing, reducing controls, risk-taking, etc. (Mcknight and Chervany 2000)?

To further develop these thoughts, a focused ethnographic study using the method is needed. As a postdoctoral fellow at NYU's Center for Urban Science and Progress, I will cultivate a range of field sites with civic entities, community groups and non-profits grappling with distance in New York City. Within these field sites I will engage in reflexive research practices to further develop the approach of constructing "views of distance." This research will culminate into a conceptual tool-kit for analyzing trust in civic system vis-à-vis the methodological practice of constructing views of distance.

### **8.5.2 The Problem Of Trust In Government**

My findings throughout this dissertation illustrate how public officials are also at the mercy of the systems that get deployed within their work environments (i.e., the city council person grappling with the impact of ATL 311; Immigrant Affairs grappling with lack of trust in existing code enforcement websites); therefore, designing with and for them is vital. While my focus on public officials closes a crucial gap in the digital civics agenda by expanding the space of design to include the vital role of public institutions in civic relations, it also obfuscates some

of the challenges design in this space will necessarily entail. In what follows, I unpack some of the assumptions and black-boxes that backgrounded the work in chapter seven.

First, what designing with trust in chapter seven revealed is the necessity of public officials allowing the researcher to conduct the user-centered design work to produce a design intervention. This required a level of openness and access into their bureaucracy that was in many ways atypical for academic/government collaborations. Even more importantly, it revealed the necessity of goodwill and benevolence from the public officials to take ownership over distance in their relationships and put in the work, the trust work, required to close the distances. This goodwill and onus is beyond the ability of the framework to determine or force; rather, it requires voluntary care and good-will on behalf of public officials—like Peter and Michelle in Immigrant Affairs—to spend the time, political capital, and institutional resources—often without incentive or support—to “go out and get democracy” in the face of distance.

As I argued earlier in this chapter, Immigrant Affairs is organizationally aligned to designing with trust—all I had to do was simply amplify what they were doing without disrupting it. For organizations that are not aligned—designing with trust would be much more problematic. Navigating this challenge requires a deep understanding and critical evaluation of the power dynamics at play. Indeed, trust is always tied to power: the act of trusting is a grant of power to someone over yourself (Luhmann 1979; Warren 1999). Therefore, when designing with trust, understanding the impact of the resulting artifact to the power balance between the trustor and trustee is paramount.

In the design space of chapter seven, I found the office was working to re-balance power by holding a private entity operating in the housing market (one of the cornerstones of neo-

liberal economics) accountable to the public (Hispanic immigrants many undocumented). In these efforts, Immigrant Affairs represents the purest version of what government should be: public officials taking the onus to reign in private entities when they are abusing the public. Yet Immigrant Affairs is not a legislative body or judicial entity, so what they can do is limited—they have limited power. Thus, designing with trust in collaboration with the office, I deemed was morally and ethically warranted.

Beyond examining the intentions and power dynamics of the individual civic entity, designing with trust will also require the researcher to look into the wider array relationships the particular entity is embedded within to question the structural ramifications of design. While my central thesis argues for the importance of relational entities like Immigrant Affairs, who perform trust work in earnest goodwill, it is also true that the creation of entities like Immigrant Affairs—which do not possess the resources nor power to enact greater structural change is a hallmark of neoliberalism’s devolution strategies that I discussed in chapter two.

Brown describes devolution as a process that passes “*large-scale problems, such as recessions, finance-capital crises, unemployment, or environmental problems, as well as fiscal crises of the state, down the pipeline to small and weak units unable to cope with them technically, politically, or financially*” (Brown 2015). She further details “*state funding cuts in education or mental health devolve responsibility for these undertakings to municipalities, which in turn devolve them to individual schools or agencies, which devolve them to individual departments, which then have something called “decision-making authority,” absent, of course, the resources to exercise this ghostly autonomy and sovereignty.*”

Many of these traits seem to be at play in the case of Immigrant Affairs: “an office” of only five people tasked with “building relationships” in the midst of the failures of US immigration policy at an international level, the corrosive federal government under Trump, massive economic inequality in Atlanta and the subsequent affordable housing crisis in the city. Indeed, they are “both too *“small and weak”* and thus unable *“to cope with these issues technically, politically, or financially.”* In this regard, a bigger picture, more critical argument on Immigrant Affairs is that its “relational work” is simply warm and fuzzy placation or therapy (even perhaps manipulation in the grand scheme of things). From the standpoint of Arnstein’s ladder of power (Arnstein 2007), none of their engagement work climbs higher than third rung at best. But this is not for a lack of wanting within the office.

I found the staff is very much aware of these limitations of their office and are constantly frustrated by them. I shared this frustration; that we are not able to engage the larger structural injustices that create the conditions of code violations to begin with. In fact, I was more interested in exploring more significant areas of civic life—voting, NPU participation, issues of gentrification, etc. However, because of the existing distances in place, and the offices’ own limited institutional power, engaging communities in the kinds of exploratory design processes aimed at the higher-rungs of the ladder of participation was not possible nor practical.

Immigrant Affairs is caught up in the larger moral and legal battles over immigration unfolding throughout our government (McHugh 2018). These power struggles are especially pronounced in Atlanta: a city with the fastest-growing immigrant population in the county and a long history of racial and class-based injustice. The current Mayor—Keisha Lance Bottoms—has been outspoken in pushing back against anti-immigration rhetoric and policies from

President Trump and the conservative governor, Brian Kemp (strongly endorsed by Trump) who ran a “tough on immigration” campaign (USA Today 2018). For instance, her administration has resisted at the local level by declaring Atlanta a sanctuary city (The Atlanta Journal-Constitution 2018). Yet, at the same time, the office is often frustrated with the Mayor’s reluctance to enact more substantive changes to city government to improve conditions of immigrants in Atlanta.

While the office does consider the Mayor an ally, as she will not stand for direct and outright racism, thus far, she seems unwilling to spend the political capital to substantially engage with the role of social group differences that structure distance in the social and political relations with immigrants in the city. It was through observing and hearing the office staff voice frustrations about these larger social and political environment through informal chats after or on the way to do fieldwork that I began to trust them beyond the scope of my specific work in chapter seven. In those candid moments, I found solace in hearing which side they were on, in the grand scheme of things. As such, I trusted them *generally* rather than merely *particularly*. The distinction is key as these two forms of trust—general and particular—are distinct and not always aligned (Uslaner 2002).

While I grappled with the above thoughts and analysis in an ad-hoc manner, ultimately concluding that the office had both goodwill and benevolence, future work needs to establish a formal approach for deeming if the public entity is (trust)worthy of designing with trust. Most notable is to this future work is Iris Marion Young’s pioneering justice framework articulated in her book “*Justice and the Politics of Difference*” (Young 2011). Young’s thoughts can be applied to avoid misuse of the framework by providing the critical perspective necessary to see the distance perpetuated by civic entities. In what follows, I briefly review Youngs’ thoughts to set the stage



for this future work.

Young's work is notable for the critique she levels against contemporary philosophical theories of justice. Distributive justice is the dominant paradigm of justice theories. As a paradigm, it frames matters of justice in the following template:

*"all situations in which justice is at issue are analogous to the situation of persons dividing a stock of goods and comparing the size of the portions individuals have."*

Young critiques the distributive justice paradigm, arguing that *"many public appeals to justice do not concern primarily the distribution of material goods."* She uses the growing calls for justice from group based social movements (e.g., Black Lives Matter, gay and lesbian liberators; movements of the disabled, the old, tenants, and the poor; and the feminist movement) to illustrate the limits of distributive justice. These groups all claim in different forms and for different reasons that American society perpetuates systematic injustice towards them, yet their claims of injustice *"find little kinship with contemporary philosophical theories of justice."* This is because distributive justice is biased towards easily identifiable "things" typically material things like income, jobs, property. Only such things that are identifiable and assignable are to be distributed—this gives priority to *substance* over *relations*, treats individuals as social atoms, while obscuring social relations and institutions. By (re)focusing on justice in relations, Young provides a new foundation for justice that is designed to address issues of power, rights, opportunity, and self-respect.

Young's attempt to deemphasize the focus on the justice of material things in favor of the justice of lived experience in social relations aligns well with notions of distance. Indeed, the calls for justice made by group based social movements that underlie her theory are in many

ways calls closure of distance in social relations: distance in decision making power, distance in social inclusion and representation, distance in hypotheticality, distance in urban space, etc. To address justice in relations, Young argues the foundation of justice must come from the concepts of ***domination and oppression***. By foregrounding justice in these concept, she escapes the narrow concerns with “*the morally proper distribution of benefits and burdens among society’s members*” in favor of “*the elimination of institutionalized domination and oppression.*” This new justice will engage directly with the role of social group differences that structure social and political relations. According to Young, explicitly acknowledging and attending to group difference is the only way to undermine oppression.

Oppression can be understood as systemic constraints on groups that are structural (rather than the result of a few people's choices or policies). As such, the causes of oppression are “*embedded in unquestioned norms, habits, and symbols, in the assumptions underlying institutional rules and the collective consequences of following those rules.*” By examining the experiences of oppression from various social groups (i.e. women, Blacks, Chicanos, Puerto Ricans and other Spanish-speaking Americans, American Indians, Jews, lesbians, gay men, Arabs, Asians, old people, working class people, and the physically and mentally disabled) she is able to derive five categories—or Five Faces—of oppression. These Five Faces are the most renowned of the contributions of Young’s work:

1. Exploitation: this oppression occurs “through a steady process of the transfer of the results of the labor of one social group to benefit another.”
2. Marginalization: this oppression occurs when, “people [are] expelled from useful participation in social life and thus potentially subjected to severe material

deprivation and even extermination. The material deprivation marginalization often causes is certainly unjust, especially in a society where others have plenty.”

3. Powerlessness: this is oppression expresses how " the powerless are situated so that they must take orders and rarely have the right to give them. Powerlessness also designates a position in the division of labor and the concomitant social position that allows persons little opportunity to develop and exercise skills.”
4. Cultural Imperialism: this oppression involves "*the universalization of a dominant group's experience and culture, and its establishment as the norm.* “
5. Violence: this oppression occurs when, “[violence] *is directed at members of a group simply because they are members of that group. The oppression of violence consists not only in direct victimization, but in the daily knowledge shared by all members of oppressed groups that they are liable to violation, solely on account of their group identity.* “

With oppression conceptualized through these Five Faces, Young suggests we can use these as criteria for determining when and how individuals or groups are oppressed:

*“Each criterion can be operationalized; each can be applied through the assessment of observable behavior, status relationships, distributions, texts and other cultural artifacts. I have no illusions that such assessments can be value-neutral. But these criteria can nevertheless serve as means of evaluating claims that a group is oppressed, or adjudicating disputes about whether or how a group is oppressed.”*

By adapting these criteria to analyze the civic entity’s role in perpetuating oppression, the researcher can determine whether are not the entity is (trust)worthy of designing with trust.

Future work should look to combine Young's thoughts with existing frameworks around social justice and design in HCI practice (Asad 2019; Baumer and Silberman 2011; Dombrowski, Harmon, and Fox 2016) and STS scholarship (Benjamin 2019; Verbeek 2011; Winner 1980) to build out the necessary critical perspective to design with trust in government in such a way that prevents the framework from contributing to oppression and domination.

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